

Hazardous Materials Planning Curriculum Guidelines

About the Planning Guidelines

The Planning Curriculum Guidelines are intended to assist public sector training managers and employers to understand the requirements for training public sector personnel involved in planning for hazardous materials emergencies. Existing regulatory requirements are defined, and training recommendations are offered to help public sector training managers improve the quality and effectiveness of hazardous materials planning.

The Planning Curriculum Guidelines are organized into 14 sections. The first section addresses general planning training issues and includes:

- What is a plan?
- Requirements for hazardous materials planning.
- The planning process.
- The need to train.
- The scope of the planning Curriculum

The second through eleventh sections address training objectives that should be achieved by public sector employees performing various hazardous materials planning functions. The competency areas are:

- Planning Orientation
- Planning Essentials
- Planning Specialties
 - Commodity Flow Study
 - Hazard Analysis
 - Capability Assessment
 - Planning for Protective Actions
 - Plan Implementation and Maintenance
 - Facility Planning
 - Planning for Public Education

The final 3 sections are appendices provided a reference in using the *Guidelines*, and include:

- Appendix A: Planning Guide Summaries
- Appendix B: Planning Models
- Appendix C: National Response Team's Integrated Contingency Plan Guidance

Directions on the use of this material to assess and to support overall planning of training programs are provided in Hazardous Materials Training Program Management at the end of this document.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
			Planning Specialties: Training Guidance										

Hazardous Materials
Planning Curriculum Guidelines:

Planning
Training Issues

Planning

General Training Issues

What is a Plan?

According to the Federal Emergency Management Agency (FEMA), an emergency operations plan (EOP) is a document that:

- Assigns responsibility to organizations and individuals for carrying out specific actions at projected times and locations in an emergency.
- Sets forth lines of authority and organizational relationships, and shows how all actions will be coordinated.
- Describes how people and property will be protected in emergencies and disasters.
- Identifies personnel, equipment, facilities, supplies, and other resources available for use during response and recovery operations.
- Identifies steps to address mitigation concerns during response and recovery activities.

The fundamental logic that underlies the development of emergency plans is that these and related decisions must be addressed before an incident occurs. During an emergency, no time exists to resolve such issues or to practice and refine roles and responsibilities. The complex analysis and preparation required to establish an effective emergency operations capability must be completed in advance so that public officials and response personnel can act quickly and decisively to control dangerous situations and protect the public.

Given this rationale, an emergency plan must be more than just a document. To be effective, all personnel who will participate in a hazardous materials emergency response must know their roles and responsibilities and be competent in the tasks they will perform. This goal is greatly enhanced by participation of tasked organizations in an integrated planning process, including exercising the plan and periodically revising the plan as needed.

The elements covered in a hazardous materials plan and the approach to planning will vary, depending on the jurisdiction's or facility's unique needs. However, all plans should contain: (1) an analysis of the emergencies likely to occur; (2) an assessment of available resources and existing capabilities; (3) detailed response operations strategies and assignments that address notification, command and control, life safety, and other functional requirements; and (4) identification of prevention measures that can mitigate the seriousness of an emergency or prevent it from occurring. The level of detail captured in the plan will also vary, but must be adequate to allow tasked organizations and individuals to develop comprehensive SOPs in their assigned areas.

Requirements for Hazardous Materials Planning

The responsibility to plan for and, if possible, prevent hazardous materials emergencies is a fundamental extension of the civic responsibility of state and local organizations to ensure the safety of responders and to protect the public. Congress recognizes this government responsibility for emergency management in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended. Hazardous materials emergency planning is also required under a number of other federal laws and regulations.

The Emergency Planning and Community Right-to-Know Act (EPCRA) Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA)

EPCRA and Title III of SARA require the formation of state emergency response commissions (SERCs), tribal emergency response commissions (TERCs), emergency planning districts, and local emergency planning committees (LEPCs). Each LEPC must develop, exercise, and maintain an emergency plan that identifies: (1) facilities and transportation routes related to specific chemicals; (2) response procedures of facilities and local emergency and medical personnel; (3) names of community and facility emergency coordinators; (4) procedures for notifying officials and the public in the event of a hazardous material release; (5) methods for detecting a release and identifying areas and populations at risk; and (6) schedules for exercising the emergency plan.

OSHA 29 CFR Part 1910.120

The Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1910.120) require employers involved in hazardous waste operations to develop and implement an emergency response plan for employees. The elements of this plan must include: (1) recognition of emergencies; (2) methods and procedures for alerting employees; (3) evacuation procedures and routes; (4) means and methods for emergency medical treatment; (5) lines of authority; (6) on-site decontamination procedures; (7) site control means; and (8) methods for evaluating the plan.

Resource Conservation and Recovery Act (RCRA)

Under subtitle C of RCRA, the Environmental Protection Agency (EPA) implements standards for the treatment, storage, and disposal of hazardous wastes through permits issued by EPA or an authorized state. Permit requirements include a facility contingency plan, with required opportunities for local government and public comment and input into the plan development.

FEMA Emergency Operations Plan Requirements

Planning requirements for jurisdictions receiving FEMA funds are set forth in 44 CFR Part 302, effective May 12, 1986. This regulation requires states and local governments to prepare emergency operations plan (EOPs) that: (1) identify available personnel, equipment, facilities, supplies, and other resources in the jurisdiction; and (2) describe the method or scheme for coordinating actions taken by individuals and government services in the event of emergencies, including those involving hazardous materials.

Coordination with Federal Response

State and local hazardous materials emergency preparedness should include plans for coordination with and support for federal response to emergencies. The National Contingency Plan (NCP) is coordinated by the National Response Team under section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The NCP provides for federal support to local responders during hazardous materials transportation and fixed facility incidents. The Federal Response Plan (FRP), coordinated by FEMA, describes resources and support for state and local governments during natural and man-made disasters, including major hazardous materials emergencies.

Other Facility Planning Requirements

Facilities that store, handle, or transport certain types and quantities of hazardous materials may be subject to additional federal contingency planning regulations. In this context, the term “facility” is meant to have a wide connotation, and may include, but is not limited to, any mobile or fixed onshore or offshore building, structure, installation, equipment, pipe, or pipeline. A particular facility may be subject to one or more of the following federal regulations:

- EPA’s Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)— 40 CFR part 112.7(d) and 112.20 to 112.21
- MMS’s Facility Response Plan Regulation—30 CFR part 254
- RSPA’s Pipeline Response Plan Regulation—49 CFR part 194
- USCG’s Facility Response Plan Regulation—33 CFR part 154, subpart F
- EPA’s Risk Management Programs Regulation—40 CFR part 68
- OSHA’s Emergency Action Plan Regulation—29 CFR 1910.38(a)
- OSHA’s Process Safety Standard—29 CFR 1910.119
- EPA’s Resource Conservation and Recovery Act Contingency Planning Requirements—40 CFR part 264, subpart D, 40 CFR part 265, subpart D, and 40 CFR part 279.52

In addition, states and local jurisdictions may mandate regulatory requirements and procedures that must be considered in hazardous materials planning. Local governments and facilities are encouraged to coordinate the development of hazardous materials plans with relevant state and local agencies to ensure compliance with any additional regulatory requirements.

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The Planning Process

There is no single correct way to write a hazardous materials emergency plan. Each entity must plan according to its own situation, based on such factors as geographic size, types of hazards, populations at risk, resources, and level of preparedness. Jurisdictions and facilities should choose the planning elements and processes most appropriate to their circumstances. However, every community and industry needs to evaluate its preparedness for hazardous materials incidents and plan accordingly.

Various explanations of the planning process can be found in the literature, including those described in the *Guide for All-Hazard Emergency Operations Planning* (FEMA SLG 101), *Hazardous Materials Emergency Planning Guide* (NRT-1), *Technical Guidance for Hazards Analysis* (EPA/FEMA/DOT), *Handbook of Chemical Hazard Analysis Procedures* (FEMA/DOT/EPA), and *Emergency Management Guide for Business & Industry* (FEMA 141). These documents and approaches to planning, which are briefly described in Appendices A and B, incorporate the generic functional requirements of planning, although the steps and procedures may be defined somewhat differently. Jurisdictions and facilities should review these and/or other models to select a process that best meets their unique planning needs and preferences.

Whatever model is adopted for the planning process, a team approach is strongly recommended. A planning team is the best mechanism for incorporating the various types of expertise needed in planning, building consensus among organizations and individuals affected by the plan, and promoting professional relationships and understanding among responders. Team members can also help ensure that plans are adequately implemented, evaluated, and maintained after promulgation, and that personnel are given the training and tools they need to achieve competency in their assigned roles and responsibilities.

No specific format is mandated for the results of hazardous materials planning. SLG 101 discusses format options for all-hazard and hazard-specific community plans. NRT's *Integrated Contingency Plan Guidance* (see Appendix C) describes an approved format for consolidating multiple plans that facilities may have to prepare in compliance with various federal regulations. However, a format is "good" if users understand it, are comfortable with it, and can extract the information they need. FEMA recommends that planning teams consider the following design characteristics when deciding upon a format: organization, progression, consistency, adaptability, and compatibility.

The approach taken in these *Guidelines* identifies two fundamental planning products, both of which are derived from a common hazards analysis and capability assessment base: (1) an emergency operations plan that addresses preparedness for, response to, and short-term recovery from hazardous materials incidents; and (2) a prevention/mitigation section of the plan that addresses measures designed to eliminate or reduce the effects of potential emergencies (e.g., land use planning, building codes, inspections, equipment testing, release detection, site security, containment, and fail safe engineering). Note that community development planning, long-term recovery, and organizational administrative planning (financial management, personnel management, record keeping, labor relations, etc.) are outside the intended scope of the *Guidelines*.

The Need to Train

The skill and training of individual responders is only one aspect of safe and effective emergency operations. Hazardous materials incidents are complex and involve the coordinated and timely actions of many different persons, often under stressful conditions. The quality of this coordination—based on clearly defined lines of authority, adequate communication systems, availability of resources when needed, etc.—may play a more important role than individual responder training in minimizing injuries and maximizing control of the emergency.

In hazardous materials emergencies, the importance of pre-response planning cannot be overstated. Plans provide a mechanism for evaluating operational strategies, defining roles and procedures, communicating organizational assignments, and assessing the adequacy of responder training. The integrated team planning process fosters trust and cooperation among individuals and organizations that must work together during an incident. Planning also leads to effective mitigation and prevention measures, thus providing communities and facilities with an opportunity to eliminate or reduce the costly and tragic effects of hazardous materials incidents before they occur.

Effective response and prevention planning depends upon the ability of the people who do the work. The quality of hazard analyses and capability assessments, and the effectiveness of response and prevention plans, is directly related to the competency of the personnel assigned responsibility for performing related tasks—public and private sector officials, agency and program managers, planners, technical experts, and many others.

OSHA's regulation 29 CFR 1910.120(q) requires that all employees be properly trained to perform their roles in response to hazardous materials emergencies. Employers are not now federally required to train personnel involved in planning. However, federal guidelines strongly recommend that all personnel who participate in the hazardous materials planning process at the state and local levels be trained to full competency to perform their roles.

The Scope of the Planning Curriculum

The *Hazardous Materials Planning Curriculum* addresses training needed by persons who have a defined role in the development, implementation, evaluation, and maintenance of hazardous materials emergency plans and standard operating procedures (SOPs). These critical documents must be prepared by state governments, local communities/jurisdictions, community support services organizations (hospitals, schools, mass care, business/industry, etc.), public sector agencies, and private sector facilities that store, use, or transport significant quantities of hazardous materials.

Training requirements for the curriculum span a tremendous variety of functions, skills, and audiences. In the public sector, functional responsibilities include directing and controlling the planning process, collecting data and managing information, identifying hazards, analyzing related vulnerabilities, estimating risk, assessing capabilities, serving as operational experts in writing plans and SOPs, implementing and integrating the results with other planning efforts, designing and evaluating complex exercises, and updating the plan on a regular basis. Individuals performing this work include community officials, SERC and LEPC members, agency and program managers, emergency managers, fire service workers, police, emergency medical services personnel, public works officials, community services and volunteer organization representatives, consultants and technical experts, and many others.

In the private sector, similar roles and functions must be performed. In addition, facilities that meet certain criteria must also conduct technically sophisticated analyses for chemicals they store, handle, or transport; develop production/process safety management plans and employee safety plans; and comply with employee and community right-to-know requirements and other reporting mandates. Potential training audiences include industry owners and executives, business planners, production/process managers, functional managers (e.g., communications, public information, emergency response, etc.), safety officers, technical experts, and others employed by the facility. Local government personnel who have responsibilities for reviewing and approving facility plans and/or enforcing compliance with existing regulations and standards may also benefit by training in this area.

This diversity of audiences and roles presents a special challenge for hazardous materials training management. Access to training audiences is more complex because the interdisciplinary nature of the audience suggests a broad range of possible training delivery mechanisms. Audience members may have limited time available for training in planning since this role is often viewed as an ancillary duty to primary work responsibilities. Finally, hazardous materials training resources may be limited, necessitating an emphasis on response training, with planning and prevention receiving a lower organizational priority.

PLANNING Training Issues
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Commodity Flow Study
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Organization of the Planning Curriculum Guidelines

The goal of the *Hazardous Materials Planning Curriculum* is to enhance the knowledge, skills, and attitudes of a broad spectrum of state and local training audiences, thus promoting better hazardous materials planning by jurisdictions and facilities. The curriculum is organized into three training levels based on general skill requirements of the target audience: Planning Orientation, Planning Essentials, and Planning Specialties. These areas are briefly described below; more detailed information on each is presented in subsequent sections of the *Guidelines*.

Planning Orientation

The Planning Orientation curriculum area provides an introduction to hazardous materials planning, with an emphasis on the need for effective plans and the benefits to be derived. Instruction is designed to help individual students identify their roles and responsibilities in the planning process, and motivate them to participate fully and effectively as planning team members. Desired training competencies include an awareness level understanding of general hazardous materials planning concepts, processes, and legal requirements. No prerequisite knowledge of planning and emergency management concepts is assumed, and no skill development is attempted. Training should result in a positive attitudinal change and a general understanding of the planning function.

Planning Essentials

The Planning Essentials curriculum area provides participants with the knowledge and skills they need to develop a basic integrated hazardous materials emergency plan for a jurisdiction or facility. The primary training audience is local planning team members. Training objectives cover a broad range of general competencies, including the ability to function effectively in a team environment, assist in or conduct a basic hazards analysis and capability assessment, work with others to analyze options and draft sections of the plan, and participate in plan implementation, evaluation, and maintenance.

Planning Essentials addresses basic skills, with an emphasis on the student's ability to interpret and use information provided by various technical specialists in developing the plan. More advanced planning skills are covered in the Planning Specialties curriculum area, discussed below. Audience members are assumed to already possess training competencies covered in Planning Orientation and an expertise in the professional discipline that the student represents on the planning committee. Managerial, administrative, and logistic requirements for organizing the planning process, including staff recruitment and assignments, are not addressed.

Planning Specialties

Recognizing that many skills are needed to support the planning process above those involved in basic plan development, the Planning Specialties curriculum area has been organized to articulate additional, often more advanced learning competencies. State and local planning needs and training requirements will vary considerably in these specialty areas. Hence, the curriculum supports selective focused training by jurisdictions and facilities in only those specialty skill areas where training is needed at any given time.

The list of specialty areas included in the curriculum is intended to reflect the prevailing needs of state and local training organizations. It is anticipated that more specialty areas will be defined over time, and some may be eliminated or modified as needs change. Specialty skill training areas identified for the current edition of the *Guidelines* include the following:

- Commodity Flow Study
- Hazards Analysis
- Capability Assessment

- Planning for Protective Actions
- Plan Implementation and Maintenance
- Facility Planning
- Planning for Public Education

Content of the Guidelines

The following sections of the *Guidelines* identify training requirements for each major curriculum area: Planning Orientation, Planning Essentials, and Planning Specialties. These requirements are defined primarily in the form of terminal and enabling objectives that describe basic competencies needed by audience members to successfully perform related tasks. Narrative information describing the curriculum area, target audiences, subject matter content, and recommended training methodologies is included, as appropriate.

The training requirements described in this model support the tasks needed to produce comprehensive OSHA and SARA Title III plans and facility plans. They reflect the general planning philosophies and team approaches incorporated in FEMA and NRT guidance. As noted previously, the training requirements address a variety of audiences and needs. A challenge for state and local training managers will be to match the unique roles and responsibilities of personnel in their jurisdictions with the categories used in this model, or to tailor the model to meet their specific needs. Assistance in this general process will be addressed in the *Guidelines for Training Program Management* section of subsequent editions of this manual.

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			Planning Specialties: Training Guidance										Summaries

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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**Hazardous Materials
Planning Training Guidelines**

Planning Orientation

Introduction

The Planning Orientation curriculum area provides an introduction to hazardous materials planning, with an emphasis on the need for planning and the benefits to be derived. Instruction should help individual students identify their roles and responsibilities in the planning process, and motivate them to participate fully and effectively as planning team members. Desired training competencies include an awareness level understanding of general hazardous materials planning concepts, processes, and legal requirements. No previous knowledge is assumed, and no skill development should be attempted. Training should result in a positive attitudinal change and the achievement of a general understanding of the planning function.

Audience

The primary training audience for Planning Orientation includes all potential participants in the hazardous materials planning process from jurisdictions, government and response agencies, community services organizations, private sector facilities and transporters, and other businesses and industries. Specifically included are elected and appointed officials, CEOs, program managers, and others who are able to influence jurisdictional and organizational planning priorities and resources. In addition, training is encouraged for the broad spectrum of persons who have a “stake” in planning, i.e., they may be impacted by the results of planning, although they have no defined role in the actual development of emergency plans. Thus, audience members might include:

- Jurisdiction and facility planning team members
- LEPC and SERC members
- Local and state government officials, including elected and appointed
- Facility owners and managers
- Representatives of government and response agencies, including SOP writers
- Representatives of community support services and volunteer organizations
- Emergency responders and mitigation/prevention personnel
- Citizens in the impacted planning jurisdiction
- Special interest and advocacy groups
- Emergency program managers

Methodology Recommendations

The typical training delivery format for Planning Orientation is a brief (one to four hours) presentation or seminar led by an experienced and dynamic facilitator. Whenever possible, the audience should include representatives from a broad range of organizations and disciplines, thereby promoting a heightened understanding of the diverse interests and requirements associated with hazardous materials planning. Since training should motivate and encourage attitudinal change, the use of presentation graphics and instructional media (slides, videotapes, etc.) is particularly appropriate. Other considerations include:

- Training must be tailored to audience needs, recognizing that some students may have no understanding of emergency management or the challenges associated with interdepartmental planning and coordination.
- When possible, training should permit group interactions and foster initial team building.
- Training experiences should be practical and constructive to promote positive attitudinal change. The discussion of hazardous materials threats, which is important to focus attention and clarify program need, should emphasize positive solutions through community and industrial planning and cooperation.
- Course materials should include local examples and issues to help generate interest and participation in local planning processes.
- Recruitment of students may be an issue due to lack of preexisting interest in the subject. “Teaser” programs and strategies to peak community interest and enrollment may be appropriate.

Recommended Training

Planning Orientation

The following instructional objectives describe student competencies recommended for orienting planning team members and others to the subject of hazardous materials planning. The legislative and regulatory basis for this training can be found primarily in the requirements specified in OSHA 1910.120 for development of employers' emergency response plan, SARA Title III for development of planning jurisdiction emergency response plans, and various federal agency regulations for development of facility and transporter emergency response plans. Sources for the material include the planning guidance in FEMA SLG 101, NRT-1, and other reference documents, the most important of which are described in the Appendices. The objectives are designed to be comprehensive, i.e., to address the training requirements of all identified audience members; thus, training developers and instructors will need to tailor these objectives to meet local audience interests, needs, and planning processes.

ORIENT-1

Objective Identification Legend

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as ORIENT-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

ORIENT-1	Given a description of potential hazardous materials risks, explain the purpose and benefits of integrated hazardous materials emergency planning, and describe typical roles and participants in the emergency management system.
ORIENT-1.1	Describe the nature of the hazardous materials threat and associated risks for the government, industry, and community, including the relationship between natural and technological hazards.
ORIENT-1.2	Describe the purpose and benefits of a comprehensive and integrated approach to hazardous materials planning, including the relationships among plans, SOPs, and exercises.
ORIENT-1.3	Describe the roles and general responsibilities of federal, state, and local government agencies and private sector organizations in integrated hazardous materials preparedness, response, recovery, and mitigation/prevention.
ORIENT-2	Given a jurisdiction or facility with the need to develop an integrated hazardous materials plan, identify legal requirements impacting the planning process and product.

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Planning Orientation

Recommended Training

- ORIENT-2.1** Identify hazardous materials planning requirements for state and local jurisdictions contained in the following authorities:
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended
 - Title III of the Superfund Amendments Reauthorization Act (SARA)
 - Hazardous Materials Emergency Planning Guide (NRT-1)
 - OSHA 29 CFR 1910.120 and EPA 40 CFR

- ORIENT-2.2** List legislation and regulations that affect facility planning requirements, including:
- EPA's Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)—40 CFR part 112.7(d) and 112.20 to 112.21
 - MMS's Facility Response Plan Regulation—30 CFR part 254
 - RSPA's Pipeline Response Plan Regulation—49 CFR part 194
 - USCG's Facility Response Plan Regulation—33 CFR part 154, subpart F
 - EPA's Risk Management Programs Regulation—40 CFR part 68
 - OSHA's Emergency Action Plan Regulation—29 CFR 1910.38(a)
 - OSHA's Process Safety Standard—29 CFR 1910.119
 - OSHA's HAZWOPER Regulation—29 CFR 1910.120
 - EPA's Resource Conservation and Recovery Act Contingency Planning Requirements—40 CFR part 264, subpart D, 40 CFR part 265, subpart D, and 40 CFR part 279.52

- ORIENT-2.3** Describe the characteristics and advantages of all-hazard planning and hazard-specific planning.

- ORIENT-3** Given the assignment to conduct hazardous materials emergency planning, identify the scope and elements of an integrated hazardous materials emergency plan.

- ORIENT-3.1** Define the scope (in terms of types of emergencies and functions to be addressed) of an integrated hazardous materials emergency plan for a jurisdiction or facility.

- ORIENT-3.2** Identify the elements of an integrated hazardous materials emergency plan that are necessary to meet local, state, and federal requirements and guidelines.

- ORIENT-4** Given the assignment to conduct hazardous materials emergency planning, identify and describe the major steps, participants, and other resources needed in the planning process.

Note: Various explanations of the planning process can be found in the literature, including those described in the Guide for All-Hazard Emergency Operations Planning (FEMA SLG 101), Hazardous Materials Emergency Planning Guide (NRT-1), Technical Guidance for Hazards Analysis (EPA/FEMA/DOT), Handbook of Chemical Hazard Analysis Procedures (FEMA/DOT/EPA), and Emergency Management Guide for Business & Industry (FEMA 141), and NRT's Integrated Contingency Plan Guidance. These approaches to planning, which are briefly described in Appendix B, incorporate the generic functional requirements of planning, although the steps and procedures may be defined somewhat differently. Jurisdictions and facilities should select and/or modify these models to best meet their unique planning needs and preferences.

- ORIENT-4.1** Identify and describe the major steps in the planning process to be used.

ORIENT-4.2	Identify participants and other resources needed for the planning process.
ORIENT-5	Given an assignment to participate in or support integrated hazardous materials planning, develop strategies for promoting planning.
ORIENT-5.1	Describe the participant's role, responsibilities, and work requirements in the integrated hazardous materials planning process.
ORIENT-5.2	Identify related information and training needs, available resources, contacts, and possible obstacles or constraints.
ORIENT-5.3	Develop strategies for promoting planning.

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Hazardous Materials
Planning Training Guidelines

Planning Essentials

Planning Essentials

General Training Considerations

Introduction

The Planning Essentials curriculum provides participants with the knowledge and skills they need to develop a basic integrated hazardous materials emergency plan for a jurisdiction or facility. The primary training audience is local planning team members. Training objectives cover a broad range of generic competencies, including the ability to function effectively in a team environment, assist in or conduct a basic hazards analysis and capability assessment, work with others to analyze options and draft sections of the plan, and participate in plan implementation, evaluation, and maintenance.

Planning Essentials covers basic skills, with an emphasis on the ability to interpret and use information provided by various technical specialists in developing the plan. More advanced planning skills are addressed in Planning Specialties. Audience members are assumed to already possess training competencies covered in Planning Orientation and an expertise in the professional discipline that the student represents on the planning committee. It is further assumed that managerial, administrative, and logistic requirements for organizing the planning process, including staff recruitment and assignments, have already been accomplished. The training competencies for senior management of the overall planning process are addressed separately in this guidance as a planning specialty area.

Audience

The training audience for Planning Essentials includes planning team members who have a defined responsibility in researching, preparing, implementing, and maintaining hazardous materials plans for jurisdictions or facilities. These persons generally represent their organization or functional specialty in an integrated planning process. Audience categories can be summarized as follows:

- For communities, training audiences may include local government emergency planners, SERC/LEPC and Area Committee members, hazardous materials officers and team leaders, emergency program managers, public sector agency representatives, community support services and volunteer organization representatives, and various technical specialists.
- For private sector facilities, audience members may include industry owners and executives, general planners, production/process managers, functional managers (e.g., communications, public information, emergency response, etc.), safety officers, technical experts, and others employed by the facility.
- Personnel who have responsibilities for reviewing and approving facility plans and/or enforcing compliance with existing community regulations and standards may also benefit by training.

Methodology Recommendations

It is recognized that the planning needs of different jurisdictions and facilities, and the resulting training needs of planning team members, can vary greatly, depending on such factors as geographic size, demographics, hazards, local resources, and political preferences. However, Planning Essentials is intended to address the generic training requirements of all hazardous materials planners. Training managers, course developers, and instructors may need to tailor materials to meet the unique needs and interests of different audiences, incorporating elements covered in Planning Specialties, as appropriate.

Training can typically be accomplished in two to four days of classroom instruction led by an experienced facilitator. Breaking training into modules (e.g., Hazards Analysis) that are delivered at different times is also possible, and this approach may be beneficial if timed to coincide with planning team assignments. However, team building is very important in the planning process, so continuity of student groupings throughout training is recommended. Other training considerations include the following:

- Training should focus on the actual development of local plans, with the product and participation in the group planning process used to demonstrate student mastery of the objectives.
- Audience should be heterogeneous, reflecting the diverse community members and professional disciplines involved in the planning process. It is highly recommended that team members who will work together in subsequent planning efforts be trained together as a team.
- Course methodology should emphasize group interactions, team building, and resolution of interpersonal conflicts, as well as the development of the plan product itself.
- Course materials should be multi-tracked in terms of type of plan (OSHA, SARA, etc.) to facilitate tailoring the instruction to the needs of the audience.
- Instruction should include practical strategies for merging local plan requirements and needs (i.e. merging several plan requirements into one development effort) to foster more efficient planning efforts.
- Instruction should emphasize the need for on-going planning commitments by the team and the organizations they represent.
- Instruction should emphasize the need for ongoing evaluation at each step in the planning process.
- Instructors should emphasize that steps in the planning process, although taught sequentially, may actually be performed simultaneously.

Recommended Training

Planning Essentials

The following instructional objectives describe competencies recommended for training planning team members and others in the essentials of hazardous materials planning. The legislative and regulatory basis for this training can be found primarily in the requirements specified in OSHA 1910.120 for development of employers' emergency response plan, SARA Title III for development of planning jurisdiction emergency response plans, and various federal agency regulations for the development of facility and transporter emergency response plans. The objectives incorporate generic concepts and processes derived from various sources in the planning literature. Several of the most important reference documents, and more specific models for planning, are described in the Appendices. The objectives are intended to be comprehensive, i.e., to address the training requirements of all identified audience members; thus, training developers and instructors will need to tailor these objectives to meet local audience interests, needs, and planning processes.

Objective Identification Legend

ESSN-1

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.)

Decimal numbers (such as ESSN-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

ESSN-1	Given an assignment as a planning team member and an overview of the planning process to be used, describe an appropriate planning strategy and identify team member responsibilities in the process.
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PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Essentials

Recommended Training

ESSN-1.1	Describe the benefits of a team approach to planning and identify skills necessary to participate in the team planning process.
ESSN-1.2	Identify team members with related roles, coordination requirements, available resources, and administrative support systems.
ESSN-1.3	Describe roles of participants in the team planning process, to include organizational and/or functional areas of responsibility.
ESSN-1.4	Demonstrate an understanding of the planning process mission statement, goals, and objectives.
ESSN-1.5	Describe the expected results of the planning process, to include the plan format and time lines.
ESSN-2	Given a review of pertinent information sources and data collection methods, demonstrate the ability to identify, acquire and summarize background information related to individual organizational and/or functional area(s) of responsibility that will impact the team planning process.
ESSN-2.1	Demonstrate the ability to identify, gather, and review copies of policies, plans, and authorities (e.g., community Emergency Operations Plans, mitigation/prevention plans, response agency SOPs, facility plans, codes and ordinances, etc.).
ESSN-2.2	Demonstrate the ability to review critiques of actual incidents, exercises, and drills and identify issues to be addressed in the plan.
ESSN-2.3	Demonstrate the ability to review changes and trends impacting the jurisdiction, organization, or facility and identify issues to be addressed in the plan.
ESSN-2.4	Demonstrate the ability to interview managers, public officials, technical specialists, and practitioners in organizations affected by the plan and identify issues to be addressed in the plan.
ESSN-2.5	Identify, aggregate, and summarize related planning issues, priorities, concerns, and challenges.
ESSN-3	Given an assignment as a planning team member and an overview of the planning process to be used, identify and describe the purpose, benefits, major steps, and participant's role in Hazards Analysis & Capability Assessment.

ESSN-3.1	Explain the purpose, benefits, and major steps in conducting a Hazards Analysis.
ESSN-3.2	Explain the purpose, benefits, and major steps in conducting a Capability Assessment.
ESSN-3.3	Identify responsibilities in the Hazards Analysis & Capability Assessment processes, as appropriate.
ESSN-3.4	Describe the methods and expected results of the Hazards Analysis & Capability Assessment processes, including roles of various planning team members and technical specialists.
ESSN-4	Given an assignment as a planning team member and an overview of the planning process to be used, demonstrate the ability to identify, collect, review and interpret the Hazards Analysis & Capability Assessment data.
ESSN-4.1	Demonstrate the ability to collect or assist in collecting the data, as required.
ESSN-4.2	Demonstrate the ability to review and interpret the data.
ESSN-4.3	Demonstrate the ability to identify, map, and prioritize hazards, risk areas, and vulnerable zones, and identify capability shortfalls and excesses (gap analysis).
ESSN-5	Given an assignment as a planning team member and the results of research and input from other planning team members, describe the issues and solutions to be addressed in the plan and identify needed assignments for developing the plan.
ESSN-5.1	Describe issues and solutions to be addressed in the plan by examining existing plans, Hazards Analysis results, Capability Assessment results and other pertinent information.
ESSN-5.2	Identify plan development tasks to be assigned to planning team and other organizational representatives.
ESSN-6	Given identified issues and solutions to be addressed in the plan and assignments to planning team members, demonstrate the ability to participate in developing or updating the Integrated Hazardous Materials Emergency Plan, to address preparedness, response and short term recovery.
ESSN-6.1	Identify the planning elements necessary to comply with regulatory requirements, standards, and guidelines.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Essentials

Recommended Training

ESSN-6.1.1	If developing or updating a jurisdictional plan, describe format guidelines specified in SLG-101 and NRT-1.
ESSN-6.1.2	If developing or updating a facility or organization plan, describe format guidelines specified in the NRT's Integrated Contingency Plan guidance.
ESSN-6.2	Demonstrate the ability to develop or update the plan to meet the required regulatory elements.
ESSN-7	Given identified issues and solutions to be addressed in the plan and assignments to planning team members, demonstrate the ability to participate in developing or updating a comprehensive prevention/mitigation section in the plan.
ESSN-7.1	Identify prevention/mitigation strategies and techniques to address the identified issues and solutions.
ESSN-7.2	Demonstrate the ability to write the plan to meet all identified prevention/mitigation planning needs.
ESSN-8	Given a completed draft hazardous materials plan, demonstrate the ability to participate in the plan review and appraisal process.
ESSN-8.1	Identify the purpose and benefits of reviewing the plan.
ESSN-8.2	Demonstrate the ability to conduct an internal draft plan review to assess adequacy and completeness.
ESSN-8.3	Demonstrate the ability to facilitate an external review of the draft plan, which may include peer review, management review, community input, and state/federal review.
ESSN-8.4	Demonstrate the ability to make necessary revisions, and promote formal plan promulgation.
ESSN-9	Given a completed hazardous materials plan, describe an appropriate strategy and identify methods for implementing the plan.
ESSN-9.1	Identify the purpose and benefits of conducting plan implementation.

ESSN-9.2	Identify roles and responsibilities for plan implementation, to include available resources, administrative systems, and time lines.
ESSN-9.3	Describe the strategy and methods for plan implementation, to include: <ul style="list-style-type: none"> • Disseminating copies of the plan • Briefing and orienting users of the plan • Coordinating the plan with other planning efforts • Coordinating the plan with other training efforts
ESSN-10	Given a completed hazardous materials plan, describe an appropriate strategy and identify methods for evaluating and maintaining the plan.
ESSN-10.1	Identify the purpose and benefits of conducting plan evaluation and maintenance.
ESSN-10.2	Identify roles and responsibilities for plan evaluation and maintenance.
ESSN-10.3	Describe the strategy and methods for plan evaluation and maintenance, to include: <ul style="list-style-type: none"> • Monitoring changes, trends, and actual events impacting the plan • Developing, conducting, and evaluating exercises and drills • Periodically updating and revising the plan

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialists Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Hazardous Materials
Planning Curriculum Guidelines:

Planning Specialties Introduction

Introduction

Recognizing that many skills are needed to support the planning process beyond those involved in basic plan development, the Planning Specialties curriculum has been organized to articulate additional, often more advanced learning competencies. It is anticipated that state and local planning needs and training requirements will vary considerably in these specialty areas. Hence, the curriculum supports selective focused training by jurisdictions in only those specialty skill areas where training is needed at any given time.

The list of specialty areas included in the curriculum is intended to reflect the prevailing needs of state and local training organizations. It is anticipated that more specialty areas will be defined over time, and some may be eliminated or modified as needs change. Specialty skill training areas identified for the current edition of the *Guidelines* include the following:

- Commodity Flow Study
- Hazards Analysis
- Capability Assessment
- Planning for Protective Actions
- Plan Implementation and Maintenance
- Facility Planning
- Planning for Public Education

Other topics planned or under discussion include Organizing the Planning Process, Planning Information Management, Exercising the Plan, SOP Writing, Illicit Use of Hazardous Materials, Liability Issues in Hazardous Materials, Marketing the Plan, and Public Information/Education Programs. Recommendations or feedback on the selection of topic areas for inclusion in future editions of the *Guidelines* should be directed to William Lewis, Emergency Management Institute, FEMA.

Audience:

The training audience for the Planning Specialties curriculum includes jurisdiction and/or facility hazardous materials planning team members that have been assigned responsibilities requiring advanced level knowledge and skills, i.e., exceeding that needed to develop a basic plan as defined in Planning Essentials. Included are representatives of local government and response agencies, community services organizations, private sector facilities and transporters, and other businesses and industries. Since audience members will vary somewhat according to the topic, they are defined in more detail for each specialty area. However, a generic listing might include:

- Jurisdiction and facility planning team members
- LEPC and SERC members
- Facility owners and managers
- Representatives of government and response agencies
- Representatives of community support services and volunteer organizations
- Mitigation/prevention personnel
- Consultants and technical experts
- Emergency program managers

Methodology Recommendations

The typical training delivery format for Planning Specialties is a one to two day course led by an experienced instructor. However, more or less time may be appropriate, depending on the subject area, degree of complexity, and related planning requirements. Training managers may also wish to combine Planning Specialties modules for audiences that need training in more than one area, or add one or more modules to Planning Essentials. Other training considerations include the following:

- Audience members are assumed to already possess basic competencies in hazardous materials plan development. Otherwise, experience and expertise among audience members may vary significantly.
- Training should be tailored to audience needs, focusing on the specific jurisdiction's or facility's planning requirements and individual assignments in the planning process.
- Course materials should include local examples, and activities should be based on local issues and data to the extent possible.
- Where local teams are conducting complex studies, members should be trained concurrently, and training should permit group interactions and foster team building.

More information on training scope, audiences, and appropriate methodologies is presented on subsequent pages for each specialty topic area.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTCP Guidance
			Planning Specialties: Training Guidance										

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Hazardous Materials
Planning Curriculum Guidelines:

Commodity Flow Study

Scope/Objectives of Training

Most communities, whether large or small, are origins, destinations, or through-routes for hazardous materials transportation. In order to plan and prepare for possible hazardous materials incidents, planners need basic data on the types and quantities of chemicals transported through the jurisdiction. The process of acquiring and analyzing this information, referred to here as a commodity flow study, is one of the first steps in preparing a community's integrated hazardous materials emergency plan. Results can be used to analyze current traffic patterns, focus planning efforts on existing needs, and reduce the potential for incidents to occur.

This training specialty area builds on Planning Essentials competencies to provide participants with the knowledge and skills they need to prepare a simple commodity flow study. Content areas covered by training should include the purpose and benefits of conducting commodity flow studies, an overview of appropriate data collection methods, generic steps in the process, related statistical concepts, and sources of additional assistance and information. Where appropriate, more specific models and procedures followed by the jurisdiction can be introduced. Applications and limitations of the study results in the planning process should also be reviewed.

Audience

Potential training audiences include all participants in the planning process that have been assigned responsibility for conducting a commodity flow study that exceeds the competencies covered under Planning Essentials. Possible audience members include:

- •Community planning team members
- Facility planners and managers
- Response agency representatives
- Prevention personnel, transport inspectors
- Technical experts and consultants

Prerequisites or Presumed Prior Knowledge/Skills of Students

Students are assumed to possess Planning Orientation and Planning Essentials levels of competency in hazards analysis and related skills. Consideration should be given to students that have a defined responsibility for conducting a commodity flow study for a jurisdiction as a regular part of their job.

Typical Program Format

Seminar-type instructor-led program, approximately one to two days in length. Longer programs may be appropriate where more complex commodity flow studies are planned or when actual field surveys are included as training activities.

Methodology and Training Delivery Considerations

Training should provide students with knowledge of the steps and components of a generic commodity flow study, and skill in performing various data collection methods. Trainees must understand the significance and application of commodity flow study information, and develop the ability to recognize and develop useful and meaningful data on which to base subsequent emergency operations and prevention programmatic and organizational decisions.

Much of the subject matter in this specialty area can be introduced through self-study, but training should include formal classroom instruction with time spent in individual and small group work. Activities should focus on skill development in identifying, collecting, and interpreting various types of commodity flow data, and in using this information in the planning process. Limited field surveys, reviews of shipping papers, role plays of driver interviews, etc. are particularly appropriate for promoting learning. Realistic local situations and scenarios should be used as the basis for activities, when possible.

Integration of the information learned by trainees can be demonstrated in a post-class activity involving the development of a limited commodity flow study based on data from the jurisdiction or scenarios provided by the instructor. For this reason, members of jurisdictional planning teams should be trained together, if possible, using the planned study as the basis for activities. Content testing is appropriate for demonstrating knowledge of the steps involved in a commodity flow study and methods of data collection.

CFS-1

Objective Identification Legend

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as CFS-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

CFS-1	Given a jurisdiction with the need to develop an integrated hazardous materials emergency plan, describe the purpose and benefits of conducting a commodity flow study, including appropriate applications of the results in planning.
CFS-1.1	Describe the purpose and benefits of conducting a commodity flow study in hazardous materials planning.
CFS-1.2	Describe appropriate applications of the results of commodity flow studies in hazardous materials planning.
CFS-2	Given an assignment to conduct a commodity flow study for a jurisdiction, identify major steps in the process, such as the following: <ol style="list-style-type: none"> (1) Identify the specific purpose(s) of the study. (2) Review baseline information appropriate to the study. (3) Design the study. (4) Conduct field surveys. (5) Analyze the results. (6) Apply the results to the study purpose and objectives.
CFS-3	Given an assignment to conduct a commodity flow study for a jurisdiction, identify the specific purpose(s) of the study.
CFS-3.1	Assess the emergency management needs and other possible applications and uses for hazardous materials transportation data in the jurisdiction.
CFS-3.2	Identify the specific types of hazardous materials transportation data needed for the study.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Commodity Flow Study

Recommended Training

CFS-4	Given the specific purpose(s) of a commodity flow study for a jurisdiction, demonstrate the ability to identify and review existing baseline information appropriate to the study.
CFS-4.1	Describe common sources of existing information that can be used to identify roads available to hazardous materials transportation.
CFS-4.2	Describe common sources of existing information on vehicle traffic patterns, chemical flows, and accident histories in the jurisdiction.
CFS-5	Given the specific purpose(s) and baseline data of a commodity flow study for a jurisdiction, demonstrate the ability to design a field investigation appropriate to the study.
CFS-5.1	Compare baseline information with project goals to determine whether a field investigation should be undertaken.
CFS-5.2	Identify options and considerations for determining survey locations.
CFS-5.3	Identify options and considerations for determining survey times and repetitions.
CFS-5.4	Identify the personnel and other resource requirements associated with selected field survey methods.
CFS-6	Given an area to be surveyed and the commodity flow study design for a jurisdiction, demonstrate the ability to implement common data collection methods.
CFS-6.1	Describe common methods and demonstrate the appropriate use of placard surveys.
CFS-6.2	Describe common methods and demonstrate the appropriate use of shipping papers reviews.
CFS-6.3	Describe common methods and demonstrate the appropriate use of driver interviews.
CFS-6.4	Describe common methods and demonstrate the appropriate use of facility surveys.
CFS-6.5	Describe the advantages and disadvantages of various data recording procedures that can be used in field surveys.
CFS-7	Given hazardous materials transportation data for a jurisdiction, demonstrate the ability to apply appropriate sampling techniques to the collection and interpretation of the data.
CFS-7.1	Describe key statistical concepts (e.g., Poisson distribution, expected and observed value, confidence intervals) relevant to traffic flow analysis.
CFS-7.2	Make appropriate conclusions and inferences based on sample characteristics and collected data.

CFS-8	Given hazardous materials transportation data and analyses for a jurisdiction, demonstrate the ability to apply the results in planning.
CFS-8.1	Map or otherwise display and report the results of the commodity flow study to obtain a clear picture of hazardous materials transportation in the jurisdiction.
CFS-8.2	Compare the study results and project goals to identify action items and a schedule for implementing them through the jurisdiction's plan development and implementation process.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials
Planning Curriculum Guidelines:

Hazards Analysis

Hazards Analysis

General Training Considerations

Scope/Objectives of Training

A hazards analysis includes (1) identifying hazards associated with the storage, handling, processing and transportation of hazardous materials, (2) conducting a vulnerability analysis to identify people, property, and environments susceptible to damage should a hazardous materials release occur, and (3) conducting a risk analysis to determine the probability of various types of emergencies and estimates of resulting damage.

Training should provide the knowledge and skills necessary to conduct a comprehensive hazards analysis for a jurisdiction or facility. Skill development should include the ability to assess the jurisdiction's or facility's hazards analysis needs, determine appropriate methods, collect and interpret data, and report the results. Specifically included is the use of tables and other tools for determining the level of concern, establishing hazard and vulnerability zones, and identifying related priorities. More sophisticated and technical approaches to hazards analysis may also be covered, if appropriate, or references provided for additional training and assistance.

Audience

Potential training audiences are all participants in the planning process that have been assigned responsibility for conducting a hazards analysis that exceeds the competencies covered under Planning Essentials. Possible audience members include:

- Community planning team members
- Facility planners and managers
- Response agency representatives
- Prevention personnel
- Technical experts and consultants

Prerequisites or Presumed Prior Knowledge/Skills of Students

Students are assumed to possess Planning Orientation and Planning Essentials levels of competency in hazards analysis. Consideration should be given to students that have a defined responsibility for conducting higher level hazards analyses for a jurisdiction or facility as a regular part of their job.

Typical Program Format

Seminar-type instructor-led program, approximately one to two days in length. Longer programs may be appropriate where more complex studies are planned or when actual field surveys are included as training activities. Training managers may wish to combine this instruction with a module on capability assessment for audiences that perform both tasks.

Methodology and Training Delivery Considerations

The successful accomplishment of training objectives should result in enhanced student proficiency in applying the principles of hazards analysis to a specific jurisdiction's or facility's planning needs and processes. Training should focus on developing knowledge of the steps and components of hazards analysis and on developing skill in performing hazard identification, vulnerability analysis, and risk analysis. Trainees must understand the significance and application of hazards analysis information, and develop the ability to recognize and develop useful and meaningful data on which to base subsequent emergency operations planning and prevention programmatic and organizational decisions.

Much of the content for analyzing hazards can be introduced through self-study, but training should include formal classroom instruction with significant time spent in individual and small group work. Activities should focus on skill development in extracting hazard identification and vulnerability information from available data sources, determining vulnerable zones from maps and hazard data, and performing the analyses leading to accurate risk determination. Content testing is appropriate for demonstrating knowl-

edge of the steps involved in hazards analysis, listing types of hazard information, and identifying the components of a completed hazards analysis.

Because of the interdisciplinary nature of planning and hazards analysis, training audiences should be heterogeneous and, whenever possible, small-group work should be conducted to encourage cross-disciplinary interactions. Integration of the information learned by the trainee can be demonstrated in a post-class activity involving the development of a limited hazards analysis using data from the trainee's home jurisdiction or facility, or scenarios provided by the instructor. Members of planning teams that are conducting a complex hazards analysis should be trained together, if possible, with student activities based on assignments.

HAZAN-1

Objective Identification Legend

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as HAZAN-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

HAZAN-1	Given an assignment to conduct a hazards analysis for a jurisdiction or facility, describe the process to be used for conducting the study.
HAZAN-1.1	Describe the purpose and benefits of conducting a hazards analysis, including appropriate applications of the results in planning.
HAZAN-1.2	Describe the basic steps in a hazards analysis (hazards identification, vulnerability analysis, risk analysis).
HAZAN-1.3	Identify types and sources of information commonly used in hazards analysis.
HAZAN-2	Given an assignment to conduct a hazards analysis for a jurisdiction or facility, demonstrate the ability to identify hazards and situations that pose a serious threat in the planning area.
HAZAN-2.1	Describe the process and data sources to be used for hazards identification.
HAZAN-2.2	Identify the location of hazardous materials facilities and major transportation routes within the planning area.
HAZAN-2.3	Identify the types, quantities, and specific locations of hazardous materials used by facilities within the planning area.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Recommended Training

HAZAN-2.4	Identify the types and quantities of hazardous materials transported in or through the planning area.
HAZAN-2.5	Assess the storage conditions of hazardous materials in the planning area (e.g., containment, packaging, security, release detection).
HAZAN-2.6	Identify the nature of hazards (e.g., flammable, explosive, toxic) most likely to accompany hazardous materials spills or releases.
HAZAN-3	Given the results of the hazard identification, demonstrate the ability to analyze and map the vulnerability of people, property, business interests, and environments in the planning area.
HAZAN-3.1	Describe the process and data sources to be used for vulnerability analysis.
HAZAN-3.2	Identify methods to screen and prioritize hazards for more in-depth analysis.
HAZAN-3.3	Identify the level of concern for chemical hazards.
HAZAN-3.4	Estimate the credible worst-case scenario for hazardous materials threats.
HAZAN-3.5	Determine the extent of vulnerable zones for identified hazards using worst-case scenarios.
HAZAN-3.6	Map vulnerable zones, and identify conditions that influence the zone of impact.
HAZAN-3.7	Identify susceptible human populations, property, business interests, and environments in the vulnerable zone, including high-risk populations, critical facilities, and sensitive environments.
HAZAN-4	Given a hazard identification and vulnerability analysis for a community or facility, demonstrate the ability to assess the risk of injury or damage due to a hazardous materials release in the planning area.
HAZAN-4.1	Describe the process and data sources to be used for risk assessment.
HAZAN-4.2	Estimate the probability of occurrence of worst-case scenarios, and describe unusual conditions, such as the possibility of simultaneous incidents.
HAZAN-4.3	Assess community and facility safeguards, response capabilities in place, and incident histories (as necessary).
HAZAN-4.4	Describe the type of harm to human populations and damage to property, business interests, and environments expected in worst-case situations.
HAZAN-4.5	Categorize, prioritize, and/or rank hazards for planning, as appropriate.

Hazards Analysis Recommended Training

HAZAN-5	Given the hazard identification, vulnerability analysis, and risk assessment for a community or facility, demonstrate the ability to prepare a comprehensive hazard analysis report.
HAZAN-5.1	Identify and describe hazards and related conditions in the planning area.
HAZAN-5.2	Describe the vulnerability of populations, property, business interests, and environments to hazardous materials threats in the planning area.
HAZAN-5.3	Describe the risk of injury and/or damage from hazardous materials incidents in the planning area, and prioritize risks for planning, as appropriate.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials Planning Curriculum Guidelines: **Capability Assessment**

Capability Assessment

General Training Considerations

Scope/Objectives of Training

A capability assessment provides information designed to help the planning team evaluate preparedness, prevention, and response resources and capabilities. It includes an assessment of fixed site business and industry resources, transportation resources, and community (response and government agency) resources that could be called upon in the event of a potential emergency identified in the jurisdiction's or facility's hazards analysis.

Training should provide the knowledge and skills necessary to conduct a capability assessment for a jurisdiction or facility. Skill development should include the ability to assess the jurisdiction's or facility's capability assessment needs, determine appropriate methods, collect and interpret data, and report the results. Specifically included is the use of checklists, criteria, surveys, and other methods to identify available resources, determine requirements for accessing them, evaluate deficiencies in existing plans and procedures, and assess the effectiveness of emergency response, prevention, and recovery efforts. The successful accomplishment of training objectives should result in enhanced student proficiency in applying general principles of capability assessment to specific jurisdiction or facility planning needs and processes.

Audience

Potential training audiences include all participants in a jurisdiction or facility planning process that have been assigned responsibility for conducting a capability assessment study. Possible audience members include:

- Community planning team members
- Facility planners and managers
- Response agency representatives
- Prevention personnel
- Technical experts and consultants

Prerequisites or Presumed Prior Knowledge/Skills of Students

Students are assumed to possess Planning Orientation and Planning Essentials levels of competency in capability assessment. Consideration should be given to students that have a defined responsibility for conducting a higher level capability assessment as a regular part of their job for a jurisdiction or facility.

Typical Program Format

Seminar-type instructor-led program, approximately one to two days in length. Longer programs may be appropriate where more complex studies are planned or when actual field surveys are included as training activities. Training managers may wish to combine this instruction with a module on hazard analysis for audiences that perform both tasks.

Methodology and Training Delivery Considerations

Training should focus on providing knowledge of the steps and components of a comprehensive capability assessment and on developing related skills. Trainees must understand the significance and application of capability assessment information, and develop the ability to recognize and develop useful and meaningful data on which to base subsequent emergency operations planning and prevention programmatic and organizational decisions.

Much of the content for assessing capabilities can be introduced through self-study, but training should include formal classroom instruction with significant time spent in individual and small group work. Activities should focus on skill development in extracting capability assessment information from available data sources, identifying and assessing existing resources, assessing the effectiveness of emergency management activities, and identifying and evaluating planning shortfalls.

Integration of the information learned by the trainee can be demonstrated in a post-class activity involving the development of a limited capability assessment based on the hazards analysis and resource data from the trainee's home jurisdiction or facility, or from scenarios provided by the instructor. Content testing is appropriate for demonstrating knowledge of the steps involved in capability assessment, listing types of community and facility resources, and identifying the components of a completed capability assessment.

Objective Identification Legend

CAP-1

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.)

Decimal numbers (such as CAP-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

CAP-1	Given an assignment to conduct a capability assessment for a jurisdiction or facility, describe the process to be used for conducting the study.
CAP-1.1	Describe the purpose and benefits of conducting a capability assessment, including appropriate applications of the results in planning.
CAP-1.2	Describe the advantages and disadvantages of alternative methods for conducting the capability assessment (checklists, criteria, surveys, expert panels, etc.).
CAP-1.3	Identify specific types and sources of information needed to conduct the capability assessment.
CAP-2	Given the process to be used for conducting a capability assessment for a jurisdiction or facility, assess the adequacy of existing resources to support preparedness, prevention/mitigation, response, and short-term recovery activities.
CAP-2.1	Determine the type, amount, capabilities, and accessibility of existing <u>facility</u> resources.
CAP-2.2	Determine the type, amount, capabilities, and accessibility of existing <u>transporter</u> resources.
CAP-2.3	Determine the type, amount, capabilities, and accessibility of existing <u>community</u> resources.
CAP-3	Given hazardous materials plans and SOPs, a completed hazard analysis, an evaluation of existing resources, critiques of incidents, exercises, and drills, and other pertinent information, demonstrate the ability to assess the jurisdiction's or facility's capability to prepare for, respond to, and recover from worst-case incidents identified in the hazard analysis.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
Planning Specialties: Training Guidance													

Capability Assessment

Recommended Training

CAP-3.1	Evaluate response issues and concerns identified through surveys and reviews of hazardous materials incident critiques, exercises, and drills.
CAP-3.2	Assess the adequacy of the jurisdiction's or facility's concept of operations, including roles and functional assignments, for responding to and recovering from worst-case incidents.
CAP-3.3	Assess the adequacy of existing resources for implementing the concept of operations in worst-case incidents.
CAP-3.4	Assess the adequacy of organizational policies and SOPs for implementing the concept of operations in worst-case incidents.
CAP-3.5	Assess the level of competency of emergency personnel to respond in worst-case incidents identified in the hazard analysis..
CAP-4	Given hazardous materials plans and SOPs, a completed hazard analysis, an evaluation of existing resources, critiques of incidents, exercises, and drills, and other pertinent information, demonstrate the ability to assess the jurisdiction's or facility's capability to prevent or mitigate the effects of identified risks.
CAP-4.1	Evaluate prevention issues and concerns identified through surveys or reviews of hazardous materials incident critiques, exercises, and drills.
CAP-4.2	Assess the adequacy of prevention measures, including roles and functional assignments, for preventing or mitigating the effects of identified risks.
CAP-4.3	Assess the adequacy of existing resources for implementing necessary prevention measures.
CAP-4.4	Assess the adequacy of organizational policies and SOPs for implementing necessary prevention measures.
CAP-4.5	Assess the level of competency of prevention personnel to implement necessary prevention measures.
CAP-5	Given the results of the capability assessment analysis, prepare a comprehensive written report.
CAP-5.1	Describe preparedness, mitigation/prevention, response, and short-term recovery capability shortfalls identified in the analysis.
CAP-5.2	Identify additional resources that may be needed to prepare for, prevent/mitigate, respond to, and recover from worst-case hazardous materials incidents.
CAP-5.3	Describe deficiencies in community and/or facility safety plans and procedures identified in the analysis, and recommend modifications, as appropriate. .

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials
Planning Curriculum Guidelines:

Planning for Protective Actions

Planning for Protective Actions

General Training Considerations

Scope/Objectives of Training:

Planning for protective actions addresses policy and procedures for providing personal protection to the public, including protection in place and evacuation. Considerations include public education, alert and warning systems, the availability of appropriate shelter, the nature and duration of hazardous materials releases, traffic flow and control, reception and care facilities, health and medical services, protection of water and sewage systems, ongoing incident assessment, and other emergency response functions and capabilities.

Training should provide a working knowledge of the benefits and limitations of various protection strategies, including evacuation, in-place protection, and a combination thereof. Participants should gain an understanding of the need for protective action planning and important planning considerations. They should develop the ability to implement a decision-making process for any given hazardous materials emergency situation and protective action option, and learn strategies and techniques for communicating the desired protection action to the general public to elicit the best possible response.

Plans for protective actions must address roles, strategies, and procedures for a broad range of emergency preparedness and response activities. Depending on the jurisdiction's or facility's needs, planning may involve very complex analyses, decisions, and negotiations that must be addressed before incidents occur. Therefore, the goal of training is to give participants the knowledge and skills they need to assess existing capabilities in this area, identify needed resources, and establish systems for promoting effective response in any realistic hazardous materials incident scenario.

Audience:

The training audience includes decision makers, planning team members, SOP writers, and agency and organization representatives with responsibilities related to mass care and protective actions in hazardous materials emergencies. Possible audience members include:

- Community planning team members
- Local Emergency Planning Committees
- Government and response agency representatives
- Facility planners and managers
- Community support services and volunteer group representatives
- Incident Commanders
- Public Information Officers
- Warning Officers
- Emergency Management Officials

Prerequisites or Presumed Knowledge/Skills of Students:

Students should have mastered basic skills in hazardous materials planning, and have assigned responsibilities for hazardous materials emergency planning for a jurisdiction or facility. They should understand basic concepts of the Incident Command System, public relations and education, and emergency information and warning.

Typical Program Format:

An instructor-facilitated one to two day program with lecture/discussion, student and/or tabletop exercises, and case study reviews. Longer programs may be appropriate where more complex studies, student activities, and field work are planned.

Methodology and Training Delivery Considerations:

Planning for protective actions requires knowledge and skills in a broad range of disciplines and emergency response functions. Typically, many different government agencies, community organizations, and private sector groups are assigned related responsibilities under the emergency plan. For these reasons, the use of planning teams is particularly suited for this type of planning. Whenever possible, planning teams should be trained together to promote information sharing, inter-organizational understanding, and cooperation. Other considerations include:

- The training competencies identified for this curriculum area assume that a comprehensive hazards analysis and capability assessment have been completed for the jurisdiction or facility. If this assumption is incorrect, training managers may wish to incorporate additional competencies from other planning specialty areas in the instruction.
- Instructional content should stress the interrelationships among planning processes, preparedness activities, response actions, and the public information and education components of emergency management.
- Training methodologies should emphasize small group interactions among various participants in the planning process. Hazardous materials incident case examples should be incorporated into the course, using student activities or tabletop exercises to promote and evaluate skill/learning objectives.
- An instructional cadre concept, emphasizing diverse organizational interests and expertise, is particularly appropriate for this type of training.

Objective Identification Legend

EVAC-1

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as EVAC-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

EVAC-1	Given a hazards analysis and capability assessment for a jurisdiction or facility, demonstrate the ability to develop decision-making criteria for implementing protective actions.
EVAC-1.1	Describe the purpose and benefits of various protective action strategies, including evacuation, in-place sheltering, water supply protection, sewage system protection, and relocation.
EVAC-1.2	Compare the advantages and disadvantages of evacuation and in-place protection options for mass care in hazardous materials emergencies.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Recommended Training

EVAC-1.3	Identify factors to consider in selecting a protective action strategy in a hazardous materials emergency situation, including: <ul style="list-style-type: none">• The nature of the threat• The population at risk• Time factors involved• Weather conditions• Communications• Response capabilities
EVAC-1.4	Identify and assess resources available for implementing various protective actions, including capabilities of organizations assigned related responsibilities under the plan.
EVAC-1.5	Develop decision-making criteria for implementing protective actions that address evacuation (precautionary, general, and selective), in-place sheltering, and other options in emergency situations identified in the hazards analysis.
EVAC-2	Given the assignment to plan for protective actions for a jurisdiction or facility, demonstrate the ability to assess existing systems, strategies, and procedures for notifying, warning, and informing the public about protective action decisions.
EVAC-2.1	Identify factors that influence the public's understanding of and response to protective actions in hazardous materials emergencies.
EVAC-2.2	Assess existing public education programs for informing the public about protective actions in the event of a hazardous materials emergency, including citizen roles and responsibilities.
EVAC-2.3	Assess existing warning and emergency public notification systems for implementing protective actions in a hazardous materials emergency.
EVAC-3	Given a hazards analysis and capability assessment for a jurisdiction or facility, demonstrate the ability to assess existing systems, strategies, and procedures for evacuating populations at risk in a hazardous material incident.
EVAC-3.1	Identify eight considerations when planning an evacuation, as follows: <ul style="list-style-type: none">(1)Emergency scene access and evacuation routes(2)Areas of responsibility(3)Geographical area, size and type(4)Evacuation area(5)Weather conditions(6)Transportation(7)Resisters(8)Mass care centers and shelters
EVAC-3.2	Identify four constraints to an effective evacuation, as denoted in the Hans and Sells Study conducted for the U.S. Environmental Protection Agency, as follows: <ul style="list-style-type: none">(1)Time delay(2)Notification time(3)Mobilization time(4)Travel time

EVAC-3.3	Identify six steps for implementing the evacuation process, as follows: (1)Form work groups (2)Track personnel assignments (3)Use map coordinates for making assignments (4)Issue evacuation warnings (5)Identify relocation shelters (6)Use the three-phase notification process
EVAC-3.4	Assess systems, strategies, and procedures for moving people out of risk areas (availability of vehicles, evacuation routes and alternatives, controlling traffic, special populations, etc.)
EVAC-3.5	Assess preparedness for reception and care of evacuees (shelter locations, supplies, notifying family members, health and medical care, mutual aid agreements, etc.)
EVAC-3.6	Assess decision-making criteria and procedures for re-entry after an evacuation.
EVAC-4	Given a hazards analysis and capability assessment for a jurisdiction or facility, demonstrate the ability to assess existing systems, strategies, and procedures for implementing in-place sheltering and other protective actions in a hazardous materials incident.
EVAC-4.1	Assess systems, strategies, and procedures for initiating and implementing in-place protection.
EVAC-4.2	Assess systems, strategies, and procedures for initiating and implementing water supply protection.
EVAC-4.3	Assess systems, strategies, and procedures for initiating and implementing sewage system protection.
EVAC-4.4	Assess systems, strategies, and procedures for monitoring toxic releases, continually assessing the potential for injury and damage, notifying the public as necessary, and terminating response activities.
EVAC-5	Given an assessment of the jurisdiction's or facility's capabilities to implement protective action options in hazardous materials incidents, demonstrate the ability to develop related emergency plans and procedures.
EVAC-5.1	Describe potential problems and capability shortfalls for implementing protective actions in worst-case hazardous materials incidents.
EVAC-5.2	Identify additional resources that may be needed to prepare for and implement protective actions in worst-case hazardous materials incidents.
EVAC-5.3	Identify recommended changes to hazardous materials emergency plans (addressing, for example, sections on the concept of operations, roles and responsibilities, direction and control, warning systems and emergency public notification, resource management, health and medical, personal protection of citizens, ongoing incident assessment, and human services).
EVAC-5.4	Describe modifications to jurisdiction and/or facility policies and procedures that are required to facilitate the recommended plan changes.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Hazardous Materials
Planning Curriculum Guidelines:

Plan Implementation and Maintenance

Plan Implementation and Maintenance

General Training Considerations

Scope/Objective of Training

Training in this curriculum area will provide students with the knowledge, skills, and practical tools they need to successfully implement a completed hazardous materials response plan, anticipate future outcomes, monitor and evaluate the plan's effectiveness, and revise it as appropriate to improve the jurisdiction's or facility's emergency operations and prevention/mitigation capabilities. Instruction builds on Planning Essentials competencies to help participants develop the feedback loop necessary for long-term plan maintenance and enhancement.

The content of training addresses (1) plan implementation, including promulgation and dissemination of the plan, orientation of plan users, and integration of multi-jurisdictional planning efforts; (2) validation of the plan, including methods of plan review, plan testing, and exercising; and (3) plan maintenance, including development of strategies and processes to identify, illuminate, and correct problems with the plan. Other subject areas potentially include environmental scanning, management audits, performance audits, and other long-term and strategic planning concepts.

Training focuses on the role of the planning manager or administrator in establishing systems and strategies for plan implementation and maintenance. This person may also participate in (and need training in) the actual writing and development of the plan, as defined in Planning Essentials and other Planning Specialties areas. Furthermore, the planning manager or administrator may function as the jurisdiction's or facility's Exercise Manager/Officer. However, advanced competencies in exercise design and development will be covered in a separate Planning Specialty area in subsequent editions of these *Guidelines*.

Audience

The training audience includes all personnel involved in the implementation, validation, and maintenance of a completed hazardous materials plan for their respective jurisdiction or facility. Audience members potentially include planners and decision makers for agencies and organizations represented in the plan, community leaders, and others interested in improving hazardous materials preparedness. Possible audience members are:

- Community planning team members
- Local Emergency Planning Committee members
- Government and response agency representatives
- Facility planners and managers
- Community support services and volunteer group representatives
- Exercise program managers and exercise officers
- Emergency Management Officials

Prerequisites or Presumed Prior Knowledge/Skills of Students

Students should possess Planning Orientation and Planning Essentials competencies and previous experience in community or organizational planning. They should have job responsibilities directly related to the management and administration of hazardous materials plans and planning processes for a jurisdiction or facility.

Typical Program Format

One to two days of classroom instruction with an emphasis on activities designed to help students develop strategies and mechanisms to assess, evaluate, and refine existing hazardous materials plans. Job aids to facilitate later work may be desirable. Training program managers may wish to combine this instruction with more in-depth materials on exercise design and development for audiences that perform both roles.

Methodology and Training Delivery Considerations

- Ideally, training audiences should be heterogeneous, reflecting the wide range of personnel involved in the integrated hazardous materials planning process. If possible, individuals who work together as members of a planning team should be trained together.
- Training methodologies should emphasize small group interactions and practical activities based on actual plans and realistic situations. Since teamwork and continuity are important in plan implementation and maintenance, it is recommended that student groupings be maintained throughout training.
- Generic case studies or scenarios should be available for use with audiences from diverse communities and organizations. The instructor should be able to flexibly tailor, update, or substitute these materials, depending on audience needs.
- Training emphasizes skills and attitudes needed for students to become effective long-term community change agents. Emphasis will be placed on methods and techniques for effecting meaningful change.

PI&M-1

Objective Identification Legend

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as PI&M-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

PI&M-1	Given the goals and objectives of the integrated hazardous materials planning process for a jurisdiction or facility, develop a strategy for plan implementation.
PI&M-1.1	List organizations and key personnel who should participate in plan implementation, including: <ul style="list-style-type: none"> • Planning team members • Organizations, groups, and facilities assigned responsibilities under the plan • Local, state, and federal oversight agencies • Community support services organizations affected by the plan
PI&M-1.2	Establish objectives for plan review and validation as part of the plan development process.
PI&M-2	Given a completed integrated hazardous materials plan for a jurisdiction or facility, develop strategies to ensure proper promulgation and dissemination of the plan.

PLANNING Training Issues
Planning Orientation
Planning Essentials
Planning Specialists Introduction
Commodity Flow Study
Hazard Analysis
Capability Assessment
Planning for Protective Actions
Plan Implementation & Maintenance
Facility Planning
Planning for Public Education
Appendix A: Planning Guide Summaries
Appendix B: Planning Models
Appendix C: MRTICP Guidance

Recommended Training

PI&M-2.1	Identify the steps necessary to ensure proper promulgation of the plan.
PI&M-2.2	Determine the information needs of various groups, and develop strategies to orient them to their roles and assignments under the plan.
PI&M-2.3	Develop strategies to orient the public on the plan, including clarifying technical information as necessary to promote public understanding.
PI&M-3	Given an approved integrated hazardous materials plan for a jurisdiction or facility, develop strategies to ensure coordination with multi-jurisdictional planning efforts.
PI&M-3.1	Identify and assess options for coordinating and integrating the plan within the jurisdiction and/or facility.
PI&M-3.2	Develop strategies to communicate the substance of the plan to other jurisdictions, including surrounding communities, state offices, and federal (national/regional) personnel involved in related planning efforts.
PI&M-3.3	Develop strategies to establish communication links with local, state, and federal organizations to obtain feedback on emergency management program changes that may affect the plan.
PI&M-4	Given an approved integrated hazardous materials plan for a jurisdiction or facility, develop strategies to ensure that organizations and personnel are capable of carrying out their assigned responsibilities.
PI&M-4.1	Develop strategies to ensure that each organization develops the SOPs necessary to facilitate the accomplishment of assigned tasks under the plan.
PI&M-4.2	Develop strategies to assess related training needs.
PI&M-4.3	Identify training programs and assistance available in the public and private sectors.
PI&M-5	Given implementation of an approved integrated hazardous materials plan for a jurisdiction or facility, develop strategies for monitoring changes and trends that impact the plan or planning process.
PI&M-5.1	Identify changes and trends that could impact the plan or planning process, including but not limited to: <ul style="list-style-type: none"> • Economic • Legal • Political • Technological • Social • Demographic
PI&M-5.2	Identify strategies for collecting and assessing information from reviews or critiques of actual hazardous materials incidents affecting the jurisdiction.

Plan Implementation and Maintenance

Recommended Training

		PLANNING Training Issues
PI&M-5.3	Identify strategies to ensure that various organizations with a role under the plan provide feedback as changes occur that may affect the plan.	Planning Orientation
PI&M-6	Given implementation of an approved integrated hazardous materials plan for a jurisdiction or facility, participate in the design and development of an exercise program that is useful for evaluating and updating the plan.	Planning Essentials
PI&M-6.1	Describe five types of exercises and their appropriate use in plan evaluation, to include: <ul style="list-style-type: none"> • Drill • Orientation • Table top • Functional • Full Scale 	Planning Specialties Introduction
PI&M-6.2	Identify the goals and objectives of the hazardous materials exercise program and its relationship to the overall planning process.	Commodity Flow Study
PI&M-6.3	Identify methods to be used for determining hazardous materials exercise needs, addressing at a minimum: <ul style="list-style-type: none"> • Number and type of exercises to be conducted • Functions to be tested (preparedness, response, recovery, and mitigation/prevention) • Exercise goals and objectives • Appropriate scenarios 	Hazard Analysis
PI&M-6.4	Identify exercise criteria, resources, and reference materials.	Capability Assessment
PI&M-6.5	On specific exercises, establish effective policies and plans for working with the Exercise Manager, organizational participants, and others to: <ul style="list-style-type: none"> • Control the exercise • Recruit and brief participants • Record and evaluate exercise play • Critique exercise results and identify follow-up actions 	Planning for Protective Actions
PI&M-7	Given changes and trends that impact the plan or planning process, incident critiques, exercise results, expert opinion, and other information, develop strategies for conducting periodic reviews and updates of the plan.	Plan Implementation & Maintenance
PI&M-7.1	Determine whether goals and objectives established in the plan have been achieved.	Facility Planning
PI&M-7.2	Evaluate changes and trends, incident critiques, exercise results, expert opinion, and other information to assess the need for plan revisions.	Planning for Public Education
PI&M-7.3	Identify strategies for making the needed revisions to the plan and for implementing the plan revisions.	Appendix A: Planning Guide Summaries
PI&M-7.4	Identify strategies and timetables for reviewing and updating the plan on a periodic basis.	Appendix B: Planning Models
		Appendix C: NRTICP Guidance

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials Planning Curriculum Guidelines: Facility Planning

Facility Planning

General Training Considerations

Scope/Objectives of Training

Facility Planners develop, validate, and maintain emergency response plans and safety plans for any facility subject to federal contingency planning regulations, as well as other facilities that wish to improve emergency preparedness through planning. They also develop procedures to ensure compliance with federal, state, and local mandates for participation in community planning and right-to-know activities. In this context, the term “facility” is meant to have a wide connotation and may include, but is not limited to, any mobile or fixed onshore or offshore building, structure, installation, equipment, pipe, or pipeline.

The Facility Planning specialty area provides participants with the knowledge and skills they need to develop a basic hazardous materials emergency plan for a facility. The primary training audience is facility planners and planning team members. Training objectives cover a broad range of generic competencies, including the ability to function effectively in a team environment, assist in or conduct a basic hazards analysis and capability assessment, work with others to analyze options and draft sections of the plan, and participate in plan implementation, evaluation, and maintenance.

The legislative and regulatory basis for this training can be found primarily in the requirements specified in OSHA 1910.120 for development of employers’ emergency response plans, SARA Title III for development of planning jurisdictions’ emergency response plans, and various federal agency regulations for the development of facility and transporter emergency response plans. The competencies defined here incorporate generic concepts and processes derived from various sources in the planning literature. Several of the most important reference documents, and more specific models for planning, are described in the Appendices. The training objectives are intended to be comprehensive, i.e., to address the requirements of all identified audience members; thus, training developers and instructors will need to tailor these objectives to meet local audience interests, needs, and planning processes.

Audience

The training audience for Facility Planning includes planning team members who have a defined responsibility in researching, preparing, implementing, and maintaining hazardous materials facility plans. These persons generally represent an organizational or functional specialty in an integrated planning process for the facility. Audience members may include industry owners and executives, business planners, production/process managers, functional managers (e.g., communications, public information, emergency response, etc.), safety officers, technical experts, and others employed by the facility. Personnel who have responsibilities for reviewing and approving facility plans and/or enforcing compliance with existing community regulations and standards may also benefit by training.

Prerequisites or Presumed Prior Knowledge/Skills of Students

Training covers basic skills, with an emphasis on the ability to interpret and use information provided by various technical specialists in developing the plan. More advanced planning skills are addressed under other Planning Specialties. Audience members are assumed to already possess training competencies covered under Planning Orientation, as well as an expertise in the professional discipline that the student represents on the planning committee. It is further assumed that managerial, administrative, and logistic requirements for organizing the planning process, including staff recruitment and assignments, have already been met.

Typical Program Format

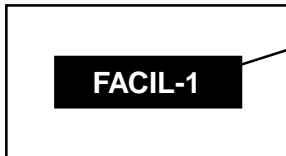
Training can typically be accomplished in two to four days of classroom instruction led by an experienced facilitator. Breaking training into modules (e.g., Hazards Analysis) that are delivered at different times is also possible, and this approach may be beneficial if timed to coincide with planning team assignments. However, team building is very important in the planning process, so continuity of student groupings throughout training is recommended.

Methodology and Training Delivery Considerations

It is recognized that the planning needs of facilities, and the resulting training needs of planning team members, can vary greatly, depending on such factors as business size, demographics, product mix, hazards, local resources, and planning preferences. However, training described here is intended to address the generic training requirements of all hazardous materials facility planners. Training managers, course developers, and instructors may need to tailor these materials to meet the unique needs and interests of different audiences, incorporating elements covered in other Planning Specialties, as appropriate. Other training considerations include the following:

- Training should focus on the actual development of facility plans, with the work product and participation in the group planning process used to demonstrate student mastery of the objectives.
- Audiences should be heterogeneous, reflecting the diverse groups and professional disciplines represented in the planning process. It is highly recommended that team members who will work together in subsequent planning efforts be trained together.
- Course methodology should emphasize group interactions, team building, and resolution of interpersonal conflicts, as well as the development of the plan product itself.
- Course materials can be multi-tracked by type of plan (OSHA, EPA, etc.) to facilitate tailoring the instruction to the needs of different audiences.
- If possible, instruction should address practical strategies for consolidating planning requirements (i.e. merging several requirements into one plan development effort) to foster greater planning efficiency.
- Instruction should emphasize the need for on-going planning commitments by the team and the organizations they represent.
- Instruction should emphasize the need for ongoing evaluation at each step in the planning process.
- Instructors should emphasize that steps in the planning process, although taught sequentially, may actually be performed simultaneously.

Objective Identification Legend



This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as FACIL-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

FACIL-1	Given an assignment as a facility planning team member, describe an appropriate planning strategy and team member responsibilities in the process.
FACIL-1.1	Describe the benefits of a team approach to planning, and identify skills necessary to participate in the team planning process.
FACIL-1.2	Identify individual roles and responsibilities in the facility planning process, to include work expectations, administrative support systems, and time lines.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Facility Planning

Recommended Training

FACIL-1.3	Identify the need to coordinate planning with outside groups (e.g., local government, surrounding jurisdictions, state offices, federal/regional offices such as EPA and FEMA, RRTs, and CAER.)
FACIL-1.4	Demonstrate understanding of the planning process mission statement, goals, and objectives.
FACIL-1.5	Describe the expected results of the planning process, to include required planning elements and plan format.
FACIL-1.6	Identify resources needed to conduct the planning process, including personnel, budgets, and technical capabilities, and solicit these resources within the company.
FACIL-2	Given an assignment as a facility planning team member, demonstrate the ability to conduct a review of federal, state, and local authorities applicable to the planning process.
FACIL-2.1	Describe the purpose and benefits of completing a review of existing plans and authorities.
FACIL-2.2	Identify methods and procedures for reviewing plans and authorities (collecting and organizing information, identifying and clarifying issues, identifying incompatibilities and shortfalls, etc.), including associated costs and staffing requirements.
FACIL-2.3	<p>Identify planning regulatory requirements that apply to the facility, to include consideration of:</p> <ul style="list-style-type: none">• SARA Title III• EPA's Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)—40 CFR part 112.7(d) and 112.20 to 112.21• MMS's Facility Response Plan Regulation—30 CFR part 254• RSPA's Pipeline Response Plan Regulation—49 CFR part 194• USCG's Facility Response Plan Regulation—33 CFR part 154, subpart F• EPA's Risk Management Programs Regulation—40 CFR part 68• OSHA's Emergency Action Plan Regulation—29 CFR 1910.38(a)• OSHA's Process Safety Standard—29 CFR 1910.119• OSHA's HAZWOPER Regulation—29 CFR 1910.120• EPA's Resource Conservation and Recovery Act Contingency Planning Requirements—40 CFR part 264, subpart D, 40 CFR part 265, subpart D, and 40 CFR part 279.52 <p>State and local policies, codes, ordinances, etc.</p>
FACIL-2.4	Describe the advantages and disadvantages of all-hazard planning and hazard-specific planning.
FACIL-3	Given an assignment as a facility planning team member, demonstrate the ability to conduct background research appropriate to the planning requirement.

FACIL-3.1	Identify critical internal and external products, services, and operations that impact the facility plan, including: <ul style="list-style-type: none"> • Internal products and services and the facilities and equipment needed to produce them • External products and services provided by suppliers, especially sole source vendors • Services such as electrical power, water, sewer, gas, telecommunications, and transportation • Operations, equipment, and personnel vital to the continued functioning of the facility
FACIL-3.2	Identify, gather, and review copies of existing hazardous materials plans (community emergency plans, mitigation/prevention plans, response agency SOPs, facility plans, etc.).
FACIL-3.3	Review critiques of actual incidents, exercises, and drills conducted by the facility or by the community with participation by the facility.
FACIL-3.4	Review important changes and trends impacting the facility.
FACIL-3.5	Conduct surveys, interviews, etc. to gather expert opinion on planning needs, as required.
FACIL-3.6	Identify and summarize related planning issues, priorities, concerns, and challenges.
FACIL-4	Given the planning process to be used by the facility, identify the purpose, benefits, methods, expected results, and participant roles in hazards analysis and capability assessment.
FACIL-4.1	Describe the purpose and benefits of conducting a hazards analysis.
FACIL-4.2	Describe the purpose and benefits of conducting a capability assessment.
FACIL-4.3	Describe the methods to be used and the expected results of the facility's hazards analysis and capability assessment processes.
FACIL-4.4	Identify organizational and team member responsibilities in the facility's hazards analysis and capability assessment processes, including the roles of various technical specialists.
FACIL-5	Given the facility's production processes and potential hazards, demonstrate the ability to identify, collect, and interpret hazards analysis and capability assessment data needed for planning.
FACIL-5.1	Collect or assist in collecting data, as identified in <i>Technical Guidance for Hazards Analysis</i> .
FACIL-5.2	Identify types of emergencies that have occurred in the community, at the facility, and in similar facilities.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide	Appendix B: Planning Models	Appendix C: NRTCP Guidance
			Planning Specialties: Training Guidance										Summaries

Facility Planning

Recommended Training

FACIL-5.3	Identify geographic factors that could contribute to potential emergencies.
FACIL-5.4	Identify types of emergencies that could occur from technological process or system failures.
FACIL-5.5	Identify types of emergencies that could occur as a result of human error.
FACIL-5.6	Identify types of emergencies that could result from the design or construction of the facility and production processes.
FACIL-5.7	For each potential emergency, identify possible complications and relationships to other emergency events, and estimate the probability of occurrence.
FACIL-5.8	Identify and evaluate internal and external resources and capabilities that could be applied in an emergency.
FACIL-5.9	Conduct an insurance review to identify and evaluate facility insurance coverage and benefits in various types of emergency situations.
FACIL-5.10	Review and interpret the data.
FACIL-5.11	Identify, map, and prioritize hazards, risk areas, and vulnerable zones, and identify capability shortfalls and excesses (gap analysis).
FACIL-6	Given the results of the facility's hazards analysis and capability assessment, demonstrate the ability to identify issues and solutions to be addressed in the plan, and assignments for developing the plan.
FACIL-6.1	Identify issues and solutions to be addressed in the facility plan by examining existing plans, hazards analysis results, capability assessment results, and other pertinent information.
FACIL-6.2	Identify facility plan development tasks and assignments.
FACIL-7	Given identified issues and solutions to be addressed in the facility plan, participate as assigned in developing or updating the hazardous materials emergency operations plan, to address preparedness, response and short-term recovery.
FACIL-7.1	Identify the planning elements necessary to comply with regulatory requirements, standards, and guidelines.
FACIL-7.2	Develop or update the emergency operations plan to meet the required planning elements.
FACIL-8	Given identified issues and solutions to be addressed in the facility plan, participate as assigned in developing or updating a comprehensive prevention/mitigation section in the plan.
FACIL-8.1	Identify prevention/mitigation strategies and techniques to address the identified issues and solutions.

		PLANNING Training Issues
FACIL-8.2	Develop or update the plan to meet all identified prevention/mitigation planning needs.	Planning Orientation
FACIL-9	Given a draft facility hazardous materials plan, participate as assigned in the plan review and appraisal process.	Planning Essentials
FACIL-9.1	Describe the purpose and benefits of reviewing the facility plan.	Planning Specialties: Training Guidance
FACIL-9.2	Conduct an internal review of the draft facility plan to assess adequacy and completeness.	Planning Specialties Introduction
FACIL-9.3	Facilitate an external review of the draft facility plan, which may include peer review, management review, and local, state and federal review.	Commodity Flow Study
FACIL-9.4	Make necessary revisions, and promote formal plan promulgation.	Hazard Analysis
FACIL-10	Given an approved hazardous materials facility plan, describe appropriate strategies and identify methods for implementing the plan.	Capability Assessment
FACIL-10.1	Describe the purpose and benefits of implementing the plan.	Planning for Protective Actions
FACIL-10.2	Describe the strategy and methods to be used for implementing the plan, to include: <ul style="list-style-type: none"> Disseminating copies of the plan Briefing and orienting users of the plan Integrating the plan with other plans and work processes within the facility 	Plan Implementation & Maintenance
FACIL-10.3	Identify options and develop strategies for coordinating the plan with multi-jurisdictional planning efforts.	Facility Planning
FACIL-10.4	Identify options and develop strategies for ensuring that personnel are adequately trained to carry out their assigned responsibilities under the plan.	Planning for Public Education
FACIL-10.5	Identify roles and responsibilities for implementing the plan, to include available resources, administrative systems, and time lines.	Appendix A: Planning Guide Summaries
FACIL-11	Given an approved hazardous materials facility plan, describe appropriate strategies and identify methods for evaluating and maintaining the plan.	Appendix B: Planning Models
FACIL-11.1	Describe the purpose and benefits of evaluating and maintaining the plan.	Appendix C: MRTICP Guidance
FACIL-11.2	Identify options and develop strategies for monitoring changes and trends affecting the facility and/or jurisdiction.	
FACIL-11.3	Identify options and develop strategies for critiquing actual incidents and accidents that occur, and for identifying and implementing remedial actions.	
FACIL-11.4	Identify options and develop strategies for developing, conducting, and evaluating exercises and drills.	

Recommended Training

FACIL-11.5

Identify options and develop strategies for conducting an annual audit of the facility plan and/or periodically updating and revising the facility plan, as necessary.

FACIL-11.6

Identify roles and responsibilities for evaluating and maintaining the facility plan, to include available resources, administrative systems, and time lines.

FACIL-11.7

Work with planning team members, facility managers, and other facility and community representatives to test planning concepts and measures (e.g., through tabletop exercises and drills), as necessary.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Hazardous Materials
Planning Curriculum Guidelines:

Planning for Public Education

Planning for Public Education

General Training Considerations

Note: There are several aspects and potential training requirements associated with hazardous materials public education. These include training for Public Information Officers (PIOs) and others who design and develop related programs, strategies, and outreach materials; training for media representatives and others who influence the perceptions of the public; and training for planners in “marketing” the plan to gain public support for the planning process. The Planning Specialty area described here identifies general competencies for individual members of the public. Other facets of public education will be addressed in subsequent editions of the *Guidelines*.

Scope/Objectives of Training

Training in this curriculum area provides an overview of the hazardous materials emergency management system, with an emphasis on the citizen’s role in that system. No skill development is attempted. Training should result in a positive attitudinal change, an improved awareness of threats to personal and community safety, an enhanced understanding of the need for and benefits of jurisdictional and facility planning and emergency management, and motivation to improve personal and community preparedness.

Benefits to be derived from training the general public include a greater understanding of and support for the jurisdiction’s emergency management system and capabilities; improved citizen understanding of appropriate actions to take in hazardous materials emergency situations; heightened cooperation with responders and prevention/mitigation personnel; and enhanced citizen planning and preparedness for potential incidents in the home or neighborhood.

Audience

The audience for public education training includes all persons who have a “stake” in the hazardous materials emergency management system, although they have no defined role in the development and implementation of emergency operations and mitigation/prevention plans. Potential audience members include the general public, community groups, volunteer groups, business/industry associations, employee groups, and others with a self-interest in improving community and individual/family preparedness.

Prerequisites or Presumed Prior Knowledge/Skills of Students

Participants are assumed to have an interest in hazardous materials threats facing the community, as well as the jurisdiction’s ability to provide effective hazardous materials emergency management. However, no prior knowledge of community plans and systems is required to participate in training.

Typical Program Format

A short (one to two hours or as need is expressed by the customer) facilitator-led presentation or seminar.

Methodology and Training Delivery Considerations

Training should emphasize opportunities for interaction with audience members to identify and address individual perceptions and concerns. Whenever possible, use of dynamic media (video, slides, computer simulations, CD-ROM, etc.) is encouraged to promote interest and motivate support. Depending on audience needs and time, simple activities, exercises, or role plays emphasizing local examples and realistic personal situations may be appropriate.

The instructor should be able to discuss a broad range of topics of potential interest to audience members, including community and household hazardous materials threats; requirements of the Emergency Planning and Community Right to Know Act; pertinent jurisdiction and facility plans and capabilities; technical resources and ways to access community information (MSDS forms, chemical inventories, release reports, etc.), and materials available from EPA, DOT, FEMA, NIEHS, and other federal, state, and local sources.

EDUC-1

Objective Identification Legend

This is the identification of the objective used in this document. It matches the identification code used in course assessment references. (See the Training Program Management section of this document.) Decimal numbers (such as EDUC-1.1) indicate enabling objectives supporting the primary objective.

Identification

Recommended Training Objectives

EDUC-1	Given residency in a specific jurisdiction, identify the purpose, benefits, and components of the jurisdiction's hazardous materials emergency management system.
EDUC-1.1	Describe the hazardous materials threat within the jurisdiction, to include the routine use of chemicals by the general public from everyday sources.
EDUC-1.2	Identify major legislation affecting the jurisdiction's hazardous materials emergency management system, including the Emergency Planning and Community Right-to-Know Act.
EDUC-1.3	Describe the jurisdiction's hazardous materials emergency management system.
EDUC-1.3.1	Describe the four phases of the comprehensive emergency management system (preparedness, response, recovery, and mitigation/prevention).
EDUC-1.3.2	Explain the purpose and participants in the jurisdiction's integrated response system.
EDUC-1.3.3	Explain the purpose and participants in the jurisdiction's prevention and mitigation system.
EDUC-1.3.4	Describe general requirements for facility planning, safety management, and emergency response.
EDUC-1.4	Identify the purpose and participants in the jurisdiction's hazardous materials planning process.
EDUC-1.4.1	Identify the jurisdiction's LEPC planning district and planning requirements.
EDUC-1.4.2	Identify major steps and participants in the hazardous materials planning process, to include hazards analysis, capability assessment, plan development, and plan evaluation.

PLANNING Training Issues
Planning Orientation
Planning Essentials
Planning Specialties Introduction
Commodity Flow Study
Hazard Analysis
Capability Assessment
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EDUC-1.4.3	Identify major components in the jurisdiction's hazardous materials plan.
EDUC-2	Given residency in a specific jurisdiction, describe the citizen's role in the jurisdiction's hazardous materials emergency management system.
EDUC-2.1	Identify the personal and community benefits of citizen participation in the jurisdiction's hazardous materials emergency management system.
EDUC-2.2	Identify ways to participate in and contribute to the jurisdiction's hazardous materials emergency management system (e.g. provide feedback, serve as resource, attend meetings, join committees)
EDUC-2.3	Describe the citizens' role in individual and family preparedness.
EDUC-2.3.1	Identify steps in conducting a personal hazards analysis, to include threats to the neighborhood.
EDUC-2.3.2	Identify components of a personal and family preparedness plan.
EDUC-2.3.3	Identify steps in testing and maintaining personal/family preparedness plans.
EDUC-3	Given residency in a specific jurisdiction, identify personal actions to promote hazardous materials emergency management.
EDUC-3.1	Identify available sources of assistance and information and requirements for accessing them.
EDUC-3.2	Develop an action plan for promoting hazardous materials emergency management and personal/family preparedness.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials Planning Curriculum Guidelines:

Appendix A: Planning Guide Summaries

Appendix A

Planning Guide Summaries

This appendix provides content summaries of key reference documents used in the preparation of the *Hazardous Materials Planning Curriculum Guidelines*. These materials include the *Guide for All-Hazard Emergency Operations Planning* (FEMA SLG 101), *Hazardous Materials Emergency Planning Guide* (NRT-1), *Technical Guidance for Hazards Analysis* (EPA/FEMA/DOT), *Handbook of Chemical Hazard Analysis Procedures* (FEMA/DOT/EPA), and *Emergency Management Guide for Business & Industry* (FEMA 141). More information on the planning models described in these materials is presented in Appendix B.

Federal Emergency Management Agency, *Guide for All-Hazard Emergency Operations Planning*, SLG 101, September 1996.

The Guide is designed as a “toolbox” of ideas and advice, not a sample emergency operations plan (EOP). It is intended primarily for use by personnel responsible for EOP development and maintenance in state and local emergency management agencies. It establishes no requirements, and its recommendations may be used, adapted, or disregarded.

This SLG replaces Civil Preparedness Guide (CPG) 1-8, *Guide for the Development of State and Local Emergency Operations Plans* (dated September 10, 1990); CPG 1-8A, *Guide for the Review of State and Local Emergency Operations Plans*, (dated October 1992); and CPG 1-10, *Guide for the Development of a State and Local Continuity of Government Capability* (dated July 27, 1987), which have been rescinded.

The document is organized as follows:

- Chapter 1 explains what an EOP is at the state and local levels, why the EOP is a necessary part of a comprehensive approach to emergency management, and how the EOP relates to other aspects of the comprehensive, risk-based, all-hazard approach.
- Chapter 2 describes the approach FEMA recommends for a step-by-step process of risk-based, all-hazard emergency operations planning (see Appendix B for more detail).
- Chapter 3 suggests how to format the results of the planning process in a written EOP. Components discussed include the Basic Plan, functional annexes, hazard-specific appendices, SOPs, and checklists.
- Chapter 4 lists and discusses elements of the Basic Plan, and provides detailed examples of the types of tasking that should be assigned to agencies, organizations, and individuals under the plan.
- Chapter 5 explains the purpose of functional annexes, and provides a brief description of eight core functions: Direction and Control, Communications, Warning, Emergency Public Information, Evacuation, Mass Care, Health and Medical Services, and Resource Management.
- Chapter 6 notes unique aspects of certain hazards, including associated regulatory requirements. It suggests how to address hazardous materials in the all-hazard EOP rather than in a stand-alone plan. The chapter is not meant to replace hazard-specific planning guidance issued by the National Response Team.
- Chapter 7 contains information on integrating State EOPs with the Federal Response Plan, so that all levels of government can provide a coordinated response to communities in need.

National Response Team, *Hazardous Materials Emergency Planning Guide*, NRT-1, March 1987.

This guidance is intended to help local communities prepare for potential incidents involving hazardous materials. It describes how to form a local planning team, find a team leader, identify and analyze hazards, identify existing response equipment and personnel, write a plan, and keep the plan up to date. The information can be used both by local communities developing their own plan, and by local emergency planning committees formed in accord with the “Emergency Planning and Community Right-to-Know Act of 1986.”

State officials seeking to develop a state emergency plan that is closely coordinated with local plans can adapt this guidance to their purposes. Likewise, officials of chemical plants, railroad yards, and shipping and trucking companies can use the guide to coordinate their own hazardous materials emergency planning with that of the local community.

The guidance deals specifically with response to hazardous materials incidents—both at fixed facilities (manufacturing, processing, storage, and disposal) and during transportation (highways, waterways, rail, and air). Plans for responding to radiological incidents and natural emergencies such as hurricanes, floods, and earthquakes are not the focus of this guidance, although most aspects of plan development and appraisal are common to these emergencies.

The guide is intended to focus community activity on emergency preparedness and response; provide communities with information useful in organizing the planning task; furnish criteria to determine risk and to help communities decide whether they need to plan for hazardous materials incidents; help communities conduct planning that is consistent with their needs and capabilities; and provide a method for continually updating a community’s emergency plan.

The document is organized as follows:

- Chapter 1: Introduction
- Chapter 2: Selecting and Organizing the Planning Team
- Chapter 3: Tasks of the Planning Team
- Chapter 4: Developing the Plan
- Chapter 5: Hazardous Materials Planning Elements
- Chapter 6: Plan Appraisal and Continuing Planning

Several appendices provide helpful information for community planning. In particular, Appendix A includes a detailed summary of Title III of SARA, and Appendix D presents criteria that can be used to assess a state or local hazardous materials emergency response preparedness program.

U.S. Environmental Protection Agency, Federal Emergency Management Agency, and U.S. Department of Transportation, *Technical Guidance for Hazards Analysis*, December 1987.

The purpose of this guide is to help local emergency planning committees (LEPCs) conduct site-specific hazards analyses for airborne releases of extremely hazardous substances (EHSs), as required by Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), also known as the Emergency Planning and Community Right-to-Know Act (EPCRA). Although these substances may also threaten property and the environment, this guide is primarily concerned with lethal effects of airborne substances on humans.

This document represents a joint effort by EPA, FEMA, and DOT to provide coordinated and coherent technical guidance. Although the guide can be useful to all community and industry planners, it is intended especially for LEPCs established under the provisions of SARA. The three steps of hazards analysis—hazards identification, vulnerability analysis, and risk analysis—provide a decision-making process for the LEPCs to follow as they undertake the development of comprehensive emergency plans mandated by SARA Title III.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Appendix A

Planning Guide Summaries

This document is organized as follows:

Chapter 1: Introduction and Overview

Chapter 2: Hazards Analysis: An Overview

2.1 - Hazards Identification

2.2 - Vulnerability Analysis for Airborne Extremely Hazardous Substances

2.3 - Risk Analysis

Chapter 3: Step-by-Step Procedures for Conducting a Hazards Analysis of Extremely Hazardous Substances

Chapter 4: Using the Results of a Hazards Analysis

Appendices:

Appendix A: Acronyms and Glossary of Terms

Appendix B: The Criteria Used to Identify Extremely Hazardous Substances

Appendix C: The List of Extremely Hazardous Substances

Appendix D: Additional Information on Levels of Concern

Appendix E: Sample Profile

Appendix F: Fire and Reactivity Hazards

Appendix G: Equations Used for the Estimation of Vulnerable Zones

Appendix H: General Considerations for Evacuation or In-Place Sheltering

Appendix I: Information Collecting to Evaluate Sites for Emergency Planning

Appendix J: Methods for Evaluating Hazards Used by Facilities

Appendix K: Evaluation Guide for Available Computer Applications Addressing Hazardous Materials Emergency Response Planning

Appendix L: Selected Bibliography

Appendix M: EPA and FEMA Regional Contacts

Federal Emergency Management Agency, U.S. Department of Transportation, and U.S. Environmental Protection Agency, *Handbook of Chemical Hazard Analysis Procedures*.

The *Handbook of Chemical Hazard Analysis Procedures* has several objectives, one of which is to expand *NRT-1* and the *Technical Guidance on Hazards Analysis* documents by including information for explosive, flammable, reactive, and otherwise dangerous chemicals. Although *NRT-1* was aimed at addressing planning for all types of hazardous materials, SARA Title III required local planners to focus on a specific initial list of acutely toxic chemicals (referred to as Extremely Hazardous Substances) due to their high inhalation toxicity when airborne, and this was the primary focus of the supplemental guidance document. By introducing additional methodologies on how to plan for these and other dangerous chemicals, this handbook serves as a stepping stone from *NRT-1* and the *Technical Guidance on Hazards Analysis* to a more comprehensive approach for emergency planning.

Beyond providing additional methodologies for assessing the potential impacts of hazardous materials releases, this handbook also expands the three-step hazards analysis approach (hazard identification, vulnerability analysis, and risk analysis) presented in *NRT-1* and its supplement by introducing a four-step approach involving hazard identification, consequence analysis, probability analysis, and risk analysis. In addition, it provides a tutorial on hazardous chemicals, suggestions for applying hazard analysis results to writing and updating an emergency plan, and an expanded discussion of issues relating to sheltering-in-place (in-place protection) and evacuation.

The document is organized as follows:

Chapter 1: Introduction

Chapter 2: Key Properties of Chemical Substances

Chapter 3: Actions Upon Release to the Environment

Chapter 4: Fire Hazards of Chemical Substances

Chapter 5: Explosion Hazards of Chemical Substances
 Chapter 6: Toxicity Hazards of Chemical Substances
 Chapter 7: Reactivity Hazards of Chemical Substances
 Chapter 8: Hazardous Material Classification Systems
 Chapter 9: Overview of the Hazard Analysis Process
 Chapter 10: Hazard Identification Guidelines
 Chapter 11: Probability Analysis Procedures
 Chapter 12: Consequence Analysis Procedures
 Chapter 13: Formulation of a Planning Basis
 Chapter 14: Use of Hazard Analysis Results in Emergency Planning

Appendices:

Appendix A: A Tutorial on Fundamental Mathematical Skills
 Appendix B: Technical Basis for Consequence Analysis Procedures
 Appendix C: Overview of “Shelter-in-Place” Concepts
 Appendix D: Chemical Compatibility Chart
 Appendix E: Guide to Installation of the ARCHIE Computer Program
 Appendix F: Basis of Probability Analysis Procedures

Federal Emergency Management Agency, *Emergency Management Guide for Business and Industry*, FEMA 141, October 1993.

This guide provides step-by-step advice on how to create and maintain a comprehensive emergency management program. It can be used by manufacturers, corporate offices, retailers, utilities, or any organization where a sizable number of people work or gather. It applies equally to businesses large or small, whether they operate from a high-rise building or an industrial complex, and whether they own, rent or lease property.

Users of the document need not have in-depth knowledge of emergency management. All that is required is the authority to create a plan and a commitment from the chief executive officer to make emergency management part of the corporate culture.

Businesses that already have a plan can use this guide as a resource to assess and update the plan. The guide is organized as follows:

Section 1: Four Steps in the Planning Process—how to form a planning team; how to conduct a vulnerability analysis; how to develop a plan; and how to implement the plan. The information can be applied to virtually any type of business or industry.

Section 2: Emergency Management Considerations—how to build such emergency management capabilities as life safety, property protection, communications, and community outreach.

Section 3: Hazard-Specific Information—technical information about specific hazards the facility may face.

Section 4: Information Sources—where to turn for additional information.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Specialties: Training Guidance

Hazardous Materials Planning Curriculum Guidelines:

Appendix B: Planning Models

Various explanations of the planning process can be found in the literature, including those described in the *Guide for All-Hazard Emergency Operations Planning* (FEMA SLG 101), *Hazardous Materials Emergency Planning Guide* (NRT-1), *Technical Guidance for Hazards Analysis* (EPA/FEMA/DOT), *Handbook of Chemical Hazard Analysis Procedures* (FEMA/DOT/EPA), and *Emergency Management Guide for Business & Industry* (FEMA 141). These approaches to planning, which are briefly described here, incorporate the generic functional requirements of planning, although the steps and procedures may be defined somewhat differently. Jurisdictions and facilities should select and/or modify these models to best meet their unique planning needs and preferences.

Federal Emergency Management Agency, *Guide for All-Hazard Emergency Operations Planning*, SLG 101, September 1996.

Chapter 2 of this Guide, The Planning Process, describes principles and major steps recommended for developing an all-hazard plan for protecting lives and property within the jurisdiction. In particular, the benefits of a team approach to planning are emphasized, including the role of the Chief Executive Official (CEO). Steps in the development and continual refinement of an emergency operations plan (EOP) are summarized as follows:

- I. **Research**—This phase involves reviewing the jurisdiction's planning framework, analyzing the hazards faced by the jurisdiction, determining the resource base, and noting characteristics of the jurisdiction that could affect emergency operations. Steps in research include:
 - A. Review applicable laws, regulatory requirements, local plans, mutual aid agreements, and existing guidance.
 - B. Conduct a Hazard/Risk Analysis
 1. Identify hazards
 - a. List hazards that concern emergency management
 - b. Determine whether these hazards have occurred or could occur
 2. Profile hazards and their potential consequences
 - a. Develop information on each hazard (frequency, magnitude, location, etc.)
 - b. Develop information on the potential consequences of the hazard
 3. Compare and prioritize risks
 4. Create and apply scenarios
 - C. Determine the resource base—list and quantify resources available for emergency response and recovery. Compare them with those needed for an effective emergency response to determine shortfalls.
 - D. Note special facets of the planning environment—geographic and topographic features that may affect operations, transportation routes, special populations, demographic and other trends, etc.
- II. **Development**—During this phase, the EOP is written through steps similar to these: developing a rough draft of the basic plan, functional annexes, and hazard-specific appendices; conducting preliminary briefings and interviews; conducting initial planning meetings and establishing committees for parts of the EOP; working with committees on successive drafts; preparing necessary graphics, and producing and circulating a final draft for planning team review and comment; holding meetings to obtain feedback and concurrence from organizations with identified responsibilities under the plan; obtaining official promulgation of the EOP; and printing and distributing the EOP.

- III. **Validation**—During this phase, the EOP is checked for conformity to applicable regulatory requirements and the standards of federal and state agencies. Recommended steps include conducting tabletop exercises with key representatives of tasked organizations as a practical means to help validate the plan; consulting with and participating in plans reviews with the next level of government; and using functional and full-scale emergency management exercises to determine if an EOP is understood and “works.”
- IV. **Maintenance**—As problems emerge, situations change, gaps become apparent, and requirements are altered, the plan must be continually adapted to remain useful and up-to-date. Possible steps include:
- A. Remedial Action Process designed to (1) capture information from exercises, post-disaster critiques, self-assessments, audits, administrative reviews, and the like which may indicate deficiencies; (2) bring together members of the planning team to discuss problems and to consider and assign responsibility for remedies; and (3) tracking and following up on assigned actions.
 - B. Revision Process for review and modification of the EOP on at least an annual basis.
 - C. Implementing Documents to ensure that each tasked organization or individual develops the SOPs necessary to facilitate the accomplishment of assigned tasks.

Attachment C of the Guide, Hazardous Materials, provides additional information on plan requirements for locating hazardous materials at fixed facilities and on transport routes, estimating vulnerable zones, determining vulnerability, and assessing risk. Planning considerations unique to hazardous materials are described under the following major headings:

- Direction and control
- Emergency public information
- Evacuation
- Mass care
- Health and medical
- Resource management

National Response Team, *Hazardous Materials Emergency Planning Guide*, NRT-1, March 1987.

This guidance presents a comprehensive approach to hazardous materials planning. However, it is emphasized that every community must plan according to its own situation. Small communities with few planning resources, or communities with few or no threatening hazards, can choose the planning elements appropriate to their circumstances. Steps in the planning process can be summarized as follows:

- I. Organizing the Planning Process
 - A. Selecting the planning team
 - B. Selecting the team leader
 - C. Organizing for planning team responsibilities, including staffing, managing the planning tasks, and the use of computers
- II. Review of Existing Plans
 - A. Reviewing applicable state and local emergency plans
 - B. Consulting with state and local agencies and volunteer organizations, regional offices of federal agencies, local industry and industrial associations, the RRT and OSC, etc.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRT/CP Guidance
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Appendix B

Planning Models

- III. Hazards Analysis
 - A. Hazards Identification
 - B. Vulnerability Analysis
 - C. Risk Analysis
- IV. Capability Assessment—sample questions are presented to help the planning team evaluate preparedness, prevention, and response resources and capabilities in the following three categories:
 - A. Facility resources
 - B. Transporter resources
 - C. Community resources
- V. Developing the Plan
 - A. Developing or revising a hazardous materials appendix to a multi-hazard EOP
 - B. Developing or revising a plan covering only hazardous materials

Planning elements and plan requirements that should be considered in this phase of the process are described in detail, including the following fourteen response functions:

- Initial Notification of Response Agencies
- Direction and Control
- Communication (among Responders)
- Warning Systems and Emergency Public Notification
- Public Information/Community Relations
- Resource Management
- Health and Medical
- Response Personnel Safety
- Personal Protection of Citizens
- Fire and Rescue
- Law Enforcement
- Ongoing Incident Assessment
- Human Services
- Public Works

- VI. Plan Appraisal and Continuing Planning
 - A. Plan Review and Approval
 - 1. Internal review
 - 2. External review
 - B. Keeping the plan up-to-date
 - C. Continuing planning
 - 1. Exercises
 - 2. Incident review
 - 3. Training

U.S. Environmental Protection Agency, Federal Emergency Management Agency, and U.S. Department of Transportation, *Technical Guidance for Hazards Analysis*, December 1987.

This guidance is compatible with and recommends the same approach to hazardous materials planning as NRT-1. However, significantly more detail is presented on the Hazards Analysis step of the process. The hazards analysis is separated into two phases. The first phase is the initial screening of all facilities reporting Extremely Hazardous Substances (EHSs) on their premises in excess of their threshold planning quantities (TPQs). The initial screening is performed to establish priorities among reporting facilities using credible worst case assumptions. The second phase represents a reassessment by order of priority of the potential hazards posed by the reporting facilities. This is accomplished through the reevaluation of the assumptions used for the initial screening.

Both the initial screening and the reevaluation phases utilize the three basic steps of hazards analysis: hazards identification, vulnerability analysis, and risk analysis. Steps in the process are summarized as follows:

Initial Screening

- I. Hazards Identification
 - A. List facilities that have reported EHSs in the community in excess of the TPQ.
 - B. Contact each facility on the list for information on the EHSs present.
 - C. Obtain information on transportation routes of EHSs, if possible.
 - D. Obtain information on hazardous materials, facilities, and transportation routes (other than for those with EHSs above the TPQ) listed by SERCs (optional).
- II. Vulnerability Analysis
 - A. Estimate the vulnerable zone for screening using credible worst case assumptions.
 - B. Identify characteristics of human populations within the estimated vulnerable zone.
 - C. Identify critical facilities within the estimated vulnerable zone.
- III. Risk Analysis
 - A. Collect information obtained in hazards identification and vulnerability analysis.
 - B. Make rough estimate of risks based on the likelihood of a release and severity of consequences.
 - C. Identify those facilities with higher priority due to the estimated risks they pose.

Planning for Facilities by Priority

- IV. Hazards Identification
 - A. Contact each facility on the list and other expert sources for additional information.
 - B. Obtain additional information on typical transportation conditions, if possible.
- V. Vulnerability Analysis
 - A. Reestimate the vulnerable zone using reevaluated assumptions from the facility and other expert sources.
 - B. Identify characteristics of human populations within the estimated vulnerable zone.
 - C. Identify critical facilities within the estimated vulnerable zone.
- VI. Risk Analysis
 - A. Collect all information obtained in hazards identification and vulnerability analysis in a table.
 - B. Obtain additional information on community and facility safeguards, response capabilities, and accident records.
 - C. Make a judgment of the probability of release and severity of consequences.
 - D. Organize all information (from A, B, and C) in a matrix format.
 - E. Rank risks.
 - F. Develop or revise emergency plans for higher priority facilities.

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Federal Emergency Management Agency, U.S. Department of Transportation, and U.S. Environmental Protection Agency, *Handbook of Chemical Hazard Analysis Procedures*.

This guide presents four basic steps for conducting a hazard analysis, and a related fifth step that takes advantage of the knowledge gained during the effort to develop a comprehensive emergency plan. These steps include:

- I. Hazard Identification—location, identification, and characterization of potential spill sources and accident sites in the jurisdiction or locality of concern. This step essentially concludes with the identification and/or postulation of fundamental accident scenarios requiring further consideration and analysis. Results from the probability analysis which follows can often help in further refining these scenarios. Methods discussed include:
 - Enforcement of right-to-know laws
 - Use of fire department and building inspection records
 - Industry questionnaires
 - Meetings with business organizations and trade groups
 - Meetings with individual business personnel
 - Queries of rail, marine, and pipeline transportation companies
 - Truck traffic surveys
 - Use of permit records
 - Use of the “Yellow Pages”
 - Access to detailed chemical property data and hazard information
- II. Probability Analysis—evaluation of the likelihood of individual accident scenarios. This step permits examination and/or prioritization of potential accident scenarios in terms of their probability of occurrence. Categories of activities discussed include:
 - Bulk transportation by highway
 - Bulk transportation by rail
 - Bulk transportation by barge or other marine vessel
 - Transportation by pipeline
 - Bulk storage, processing, or handling at fixed facilities
 - Transportation of packaged hazardous materials
 - Transportation by air
- III. Consequence Analysis—evaluation of the consequences and impacts associated with the occurrence of postulated accident scenarios. This step provides an understanding of the nature and outcome of an accident and permits examination and/or prioritization of scenarios in terms of their potential impact on people and property. The Automated Resource for Chemical Hazard Incident Evaluation (ARCHIE) computer program and a set of hazard assessment procedures and models are discussed.
- IV. Risk Analysis—combination of results from the accident probability and consequence analysis efforts to provide a measure of overall risk associated with the specific activity or activities. The effort permits examination and/or prioritization of scenarios in terms of *overall* risk. Steps include:
 - Definition of annual accident probability categories
 - Definition of accident severity categories
 - Application of screening guidelines

- V. Formulation of a Planning Basis—use of the results of the above activities during actual development and preparation of an emergency plan. The material includes discussion of 43 separate topics in 13 subject areas, as follows:

- Notification
- Command and Communications
- Evacuation
- Fire response
- Health Care
- Personal Protection
- Public Relations
- Spill Containment and Cleanup
- Spill Documentation
- Spill Monitoring
- Post-Spill Recovery
- Training
- Waste Disposal

Federal Emergency Management Agency, *Emergency Management Guide for Business & Industry*, FEMA 141, October 1993.

This document emphasizes the emergency planning and management needs of business and industry. Four steps are identified in the planning process, as follows:

- I. Establish a Planning Team
 - A. Form the team
 - B. Establish authority
 - C. Issue a mission statement
 - D. Establish a schedule and budget
- II. Analyze Capabilities and Hazards
 - A. Where do you stand right now?
 1. Review internal plans and policies
 2. Meet with outside groups
 3. Identify codes and regulations
 4. Identify critical products, services, and operations
 5. Identify internal resources and capabilities
 6. Identify external resources
 7. Do an insurance review
 - B. Conduct a vulnerability analysis
 1. List potential emergencies
 2. Estimate probability
 3. Assess the potential human impact
 4. Assess the potential property impact
 5. Assess the potential business impact
 6. Assess internal and external resources
 7. Add the columns

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
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Planning Models

- III. Develop the Plan
 - A. Identify challenges and prioritize activities
 - B. Write the plan
 - C. Establish a training schedule
 - D. Coordinate with outside organizations
 - E. Maintain contact with other corporate offices
 - F. Review, conduct training and revise
 - G. Seek final approval
 - H. Distribute the plan
- IV. Implement the Plan
 - A. Integrate the plan into company operations
 - B. Conduct training (including exercises and drills)
 - C. Evaluate and modify the plan

The guide also identifies planning considerations that are unique to hazardous materials, as well as core operational considerations of emergency management, in the following categories:

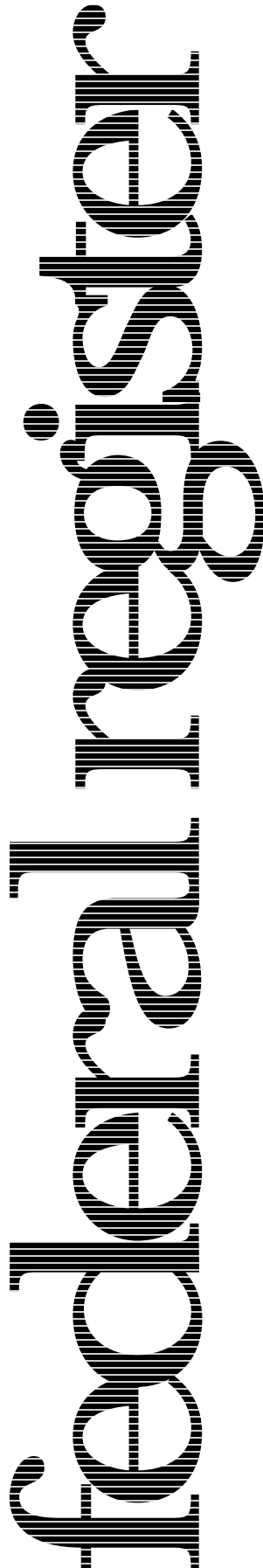
- Direction and Control
- Communications
- Life Safety
- Property Protection
- Community Outreach
- Recovery and Restoration
- Administration and Logistics

PLANNING Training Issues	Planning Orientation	Planning Essentials	Planning Specialties Introduction	Commodity Flow Study	Hazard Analysis	Capability Assessment	Planning for Protective Actions	Plan Implementation & Maintenance	Facility Planning	Planning for Public Education	Appendix A: Planning Guide Summaries	Appendix B: Planning Models	Appendix C: NRTICP Guidance
			Planning Specialties: Training Guidance										

**Hazardous Materials
Planning Curriculum Guidelines:**

Appendix C: National Response Team's Integrated Contingency Plan Guidance

Note: This material was published in the Federal Register on Wednesday, June 5, 1996, and is reprinted in its entirety in this appendix. Page numbers shown are those from the Federal Register publication.



Wednesday
June 5, 1996

Part II

Environmental Protection Agency

Department of Transportation

Coast Guard

Research and Special Programs
Administration

Department of the Interior

Minerals Management Service

Department of Labor

Occupational Safety and Health
Administration

The National Response Team's Integrated
Contingency Plan Guidance; Notice

ENVIRONMENTAL PROTECTION AGENCY**DEPARTMENT OF TRANSPORTATION****Coast Guard****Research and Special Programs Administration****DEPARTMENT OF THE INTERIOR****Minerals Management Service****DEPARTMENT OF LABOR****Occupational Safety and Health Administration**

[FRL-5512-8]

The National Response Team's Integrated Contingency Plan Guidance

AGENCY: Environmental Protection Agency (EPA), U.S. Coast Guard (USCG), Minerals Management Service (MMS), Research and Special Programs Administration (RSPA), Occupational Safety and Health Administration (OSHA).

ACTION: Notice.

SUMMARY: The U.S. Environmental Protection Agency, as the chair of the National Response Team (NRT), is announcing the availability of the NRT's Integrated Contingency Plan Guidance ("one plan"). This guidance is intended to be used by facilities to prepare emergency response plans. The intent of the NRT is to provide a mechanism for consolidating multiple plans that facilities may have prepared to comply with various regulations into one functional emergency response plan or integrated contingency plan (ICP). This notice contains the suggested ICP outline as well as guidance on how to develop an ICP and demonstrate compliance with various regulatory requirements. The policies set out in this notice are intended solely as guidance.

ADDRESSES: Additional copies of this one-plan guidance can be obtained by writing to the following address: William Finan, U.S. Environmental Protection Agency, Mail Code 5101, 401 M Street SW, Washington, DC 20460. Copies of the ICP Guidance are also available by calling the EPCRA/RCRA/Superfund Hotline at (800) 424-9346 (in the Washington, DC, metropolitan area, (703) 412-9810). In addition, this guidance is available electronically at the home page of EPA's Chemical Emergency Preparedness and Prevention Office (<http://www.epa.gov/swercepp/>).

FOR FURTHER INFORMATION CONTACT: William Finan, U.S. Environmental Protection Agency, Mail Code 5101, 401 M Street, SW., Washington, DC 20460, at (202) 260-0030 (E-Mail homepage.ceppo@epamail.epa.gov—please include "one plan" in the subject line). In addition, the EPCRA/RCRA/Superfund Hotline can answer general questions about the guidance.

For further information and guidance on complying with specific regulations, contact: for EPA's Oil Pollution Prevention Regulation: Bobbie Lively-Diebold, U.S. Environmental Protection Agency, Mail Code 5203G, 401 M Street, SW., Washington, DC 20460, at (703) 356-8774 (E-Mail Lively.Barbara@epamail.epa.gov), or the SPCC Information Line at (202) 260-2342; for the U.S. Coast Guard's Facility Response Plan Regulation: LCDR Mark Hamilton, U.S. Coast Guard, Commandant (G-MOR), 2100 2nd Street, SW., Washington, DC 20593, at 202-267-1983 (E-Mail M.Hamilton/G-M03@CGSMTP.uscg.mil); for DOT/RSPA's Pipeline Response Plan Regulation: Jim Taylor, U.S. Department of Transportation, Room 2335, 400 7th Street, SW., Washington, DC 20590 at (202) 366-8860 (E-Mail OPATEAM@RSPA.DOT.GOV); for pertinent OSHA regulations, contact either your Regional or Area OSHA office; for DOI/MMS' Facility Response Plan Regulation: Larry Ake, U.S. Department of the Interior—Minerals Management Service, MS 4700, 381 Elden Street, Herndon, VA 22070-4817 at (703) 787-1567 (E-Mail Ake@SMTP.MMS.GOV); for EPA's Risk Management Program Regulation: William Finan (see above); and for RCRA's Contingency Planning Requirements, contact the EPCRA/RCRA/Superfund Hotline (see above).

The NRT welcomes comments on specific implementation issues related to this guidance. Please provide us with information about the successful use of this guidance, about problems with using this guidance, as well as suggestions for improving the guidance. Send comments to William Finan (see above) or to any of the other people listed in the previous paragraph.

SUPPLEMENTARY INFORMATION:**Presidential Review Findings**

Section 112(r)(10) of the Clean Air Act required the President to conduct a review of federal release prevention, mitigation, and response authorities. The Presidential Review was delegated to EPA, in coordination with agencies and departments that are members of the National Response Team (NRT). The

Presidential Review concluded that, while achieving its statutory goals to protect public safety and the environment, the current system is complex, confusing, and costly. It identified several key problem areas and recommended a second phase to address these issues. One of the issues identified by the Presidential Review is the multiple and overlapping federal requirements for facility emergency response plans.

NRT Policy Statement

This one-plan guidance is intended to be used by facilities to prepare emergency response plans for responding to releases of oil and non-radiological hazardous substances. The intent of NRT is to provide a mechanism for consolidating multiple plans that facilities may have prepared to comply with various regulations into one functional emergency response plan or integrated contingency plan (ICP). A number of statutes and regulations, administered by several federal agencies, include requirements for emergency response planning. A particular facility may be subject to one or more of the following federal regulations:

- EPA's Oil Pollution Prevention Regulation (SPCC and Facility Response Plan Requirements)—40 CFR part 112.7(d) and 112.20-21;
- MMS's Facility Response Plan Regulation—30 CFR part 254;
- RSPA's Pipeline Response Plan Regulation—49 CFR part 194;
- USCG's Facility Response Plan Regulation—33 CFR part 154, Subpart F;
- EPA's Risk Management Programs Regulation—40 CFR part 68;
- OSHA's Emergency Action Plan Regulation—29 CFR 1910.38(a);
- OSHA's Process Safety Standard—29 CFR 1910.119;
- OSHA's HAZWOPER Regulation—29 CFR 1910.120; and
- EPA's Resource Conservation and Recovery Act Contingency Planning Requirements—40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52.

In addition, facilities may also be subject to state emergency response planning requirements that this guidance does not specifically address. Facilities are encouraged to coordinate development of their ICP with relevant state and local agencies to ensure compliance with any additional regulatory requirements.

Individual agencies' planning requirements and plan review procedures are not changed by the advent of the ICP format option. This one-plan guidance has been developed

to assist facilities in demonstrating compliance with the existing federal emergency response planning requirements referenced above. Although it does not relieve facilities from their current obligations, it has been designed specifically to help meet those obligations. Adherence to this guidance is not required in order to comply with federal regulatory requirements. Facilities are free to continue maintaining multiple plans to demonstrate federal regulatory compliance; however, the NRT believes that an integrated plan prepared in accordance with this guidance is a preferable alternative.

The NRT realizes that many existing regulations pertaining to contingency planning require review by a specific agency to determine compliance with applicable requirements. It is not the intent of the NRT to modify existing agency review procedures or to supersede the requirements of a regulation.

This one-plan guidance was developed through a cooperative effort among numerous NRT agencies, state and local officials, and industry and community representatives. The NRT and the agencies responsible for reviewing and approving federal response plans to which the ICP option applies agree that integrated response plans prepared in the format provided in this guidance will be acceptable and be the federally preferred method of response planning. The NRT realizes that alternate formats for integrating multiple plans already exist and that others likely will be developed. Certain facilities may find those formats more desirable than the one proposed here. The NRT believes that a single functional plan is preferable to multiple plans regardless of the specific format chosen. While they are acceptable, other formats may not allow the same ease of coordination with external plans. In any case, whatever format a facility chooses, no individual NRT agency will require an integrated response planning format differing from the ICP format described here. The NRT anticipates that future development of all federal regulations addressing emergency response planning will incorporate use of the ICP guidance. Also, developers of state and local requirements will be encouraged to be consistent with this document.

The ICP guidance does not change existing regulatory requirements; rather, it provides a format for organizing and presenting material currently required by the regulations. Individual regulations are often more detailed than the ICP guidance. To ensure full compliance, facilities should continue

to read and comply with all of the federal regulations that apply to them. Furthermore, facilities submitting an ICP (in whatever format) for agency or department review will need to provide a cross-reference to existing regulatory requirements so that plan reviewers can verify compliance with these requirements. The guidance contains a series of matrices designed to assist owners and operators in consolidating various plans and documenting compliance with federal regulatory requirements. (See Attachments 2 and 3.) The matrices can be used as the basis for developing a cross-reference to various regulatory requirements.

This guidance also provides a useful contingency planning template for owners and operators of facilities not subject to the federal regulations cited previously.

Integrated Contingency Plan Philosophy

The ICP will minimize duplication in the preparation and use of emergency response plans at the same facility and will improve economic efficiency for both the regulated and regulating communities. Facility expenditures for the preparation, maintenance, submission, and update of a single plan should be much lower than for multiple plans.

The use of a single emergency response plan per facility will eliminate confusion for facility first responders who often must decide which of their plans is applicable to a particular emergency. The guidance is designed to yield a highly functional document for use in varied emergency situations while providing a mechanism for complying with multiple agency requirements. Use of a single integrated plan should also improve coordination between facility response personnel and local, state, and federal emergency response personnel.

The adoption of a standard plan format should facilitate integration of plans within a facility, in the event that large facilities may need to prepare separate plans for distinct operating units. The ICP concept should also allow coordination of facility plans with plans that are maintained by local emergency planning committees (LEPCs),¹ Area Committees,² co-operatives, and mutual aid organizations. In some cases, there are

¹ LEPC plans are developed by LEPCs in coordination with facility emergency response coordinators under section 303 of the Emergency Planning and Community Right-to-Know Act.

² Area Contingency Plans are developed by Area Committees pursuant to section 4202(a)(6) of the Oil Pollution Act of 1990 (OPA).

specific regulatory requirements to ensure that facility plans are consistent with external planning efforts. Industry use of this guidance along with active participation on local and Area Committees will improve the level of emergency preparedness and is therefore highly encouraged.

In some areas, it may be possible to go beyond simple coordination of plans and actually integrate certain information from facility plans with corresponding areas of external plans. The adoption of a single, common ICP outline such as the one proposed in this guidance would facilitate a move toward integration of facility plans with local, state, and federal plans.

The projected results described above will ultimately serve the mutual goal of the response community to more efficiently and effectively protect public health, worker safety, the environment, and property.

Scope

This one-plan guidance is provided for any facility subject to federal contingency planning regulations and is also recommended for use by other facilities to improve emergency preparedness through planning. In this context, the term "facility" is meant to have a wide connotation and may include, but is not limited to, any mobile or fixed onshore or offshore building, structure, installation, equipment, pipe, or pipeline.

Facility hazards need to be addressed in a comprehensive and coordinated manner. Accordingly, this guidance is broadly constructed to allow for facilities to address a wide range of risks in a manner tailored to the specific needs of the facility. This includes both physical and chemical hazards associated with events such as chemical releases, oil spills, fires, explosions, and natural disasters.

Organizational Concepts

The ICP format provided in this one-plan guidance (See Attachment 1) is organized into three main sections: an introductory section, a core plan, and a series of supporting annexes. It is important to note that the elements contained in these sections are not new concepts, but accepted emergency response activities that are currently addressed in various forms in existing contingency planning regulations. The goal of the NRT is not to create new planning requirements, but to provide a mechanism to consolidate existing concepts into a single functional plan structure. This approach would provide a consistent basis for addressing

emergency response concerns as it gains widespread use among facilities.

The introduction section of the plan format is designed to provide facility response personnel, outside responders, and regulatory officials with basic information about the plan and the entity it covers. It calls for a statement of purpose and scope, a table of contents, information on the current revision date of the plan, general facility information, and the key contact(s) for plan development and maintenance. This section should present the information in a brief factual manner.

The structure of the sample core plan and annexes in this guidance is based on the structure of the National Interagency Incident Management System (NIIMS) Incident Command System (ICS). NIIMS ICS is a nationally recognized system currently in use by numerous federal, state, and local organizations (e.g., some Area Committees under OPA). NIIMS ICS is a type of response management system that has been used successfully in a variety of emergency situations, including releases of oil or hazardous substances. NIIMS ICS provides a commonly understood framework that allows for effective interaction among response personnel. Organizing the ICP along the lines of the NIIMS ICS will allow the plan to dovetail with established response management practices, thus facilitating its ease of use during an emergency.

The core plan is intended to contain essential response guidance and procedures. Annexes would contain more detailed supporting information on specific response management functions. The core plan should contain frequent references to the response critical annexes to direct response personnel to parts of the ICP that contain more detailed information on the appropriate course of action for responders to take during various stages of a response. Facility planners need to find the right balance between the amount of information contained in the core plan versus the response critical annexes (Annexes 1 through 3). Information required to support response actions at facilities with multiple hazards will likely be contained in the annexes. Planners at facilities with fewer hazards may choose to include most if not all information in the core plan. Other annexes (e.g., Annexes 4 through 8) are dedicated to providing information that is non-critical at the time of a response (e.g., cross-references to demonstrate regulatory compliance and background planning information). Consistent with the goal of keeping the size of the ICP

as manageable as practicable, it is not necessary for a plan holder to provide its field responders with all the compliance documentation (e.g., Annexes 4 through 8) that it submits to regulatory agencies. Similarly, it may not be necessary for a plan holder to submit all annexes to every regulatory agency for review.

Basic headings are consistent across the core plan and annexes to facilitate ease of use during an emergency. These headings provide a comprehensive list of elements to be addressed in the core plan and response annexes and may not be relevant to all facilities. Planners should address those regulatory elements that are applicable to their particular facilities. Planners at facilities with multiple hazards will need to address most, if not all, elements included in this guidance. Planners at facilities with fewer hazards may not need to address certain elements. If planners choose to strictly adopt the ICP outline contained in this guidance but are not required by regulation to address all elements of the outline, they may simply indicate "not applicable" for those items where no information is provided. A more detailed discussion of the core plan and supporting annexes follows.

Core Plan

The core plan is intended to reflect the essential steps necessary to initiate, conduct, and terminate an emergency response action: recognition, notification, and initial response, including assessment, mobilization, and implementation. This section of the plan should be concise and easy to follow. A rule of thumb is that the core plan should fit in the glovebox of a response vehicle. The core plan need not detail all procedures necessary under these phases of a response but should provide information that is time critical in the earliest stages of a response and a framework to guide responders through key steps necessary to mount an effective response. The response action section should be convenient to use and understandable at the appropriate skill level.

The NRT recommends the use of checklists or flowcharts wherever possible to capture these steps in a concise easy-to-understand manner. The core plan should be constructed to contain references to appropriate sections of the supporting annexes for more detailed guidance on specific procedures. The NRT anticipates that for a large, complex facility with multiple hazards the annexes will contain a significant amount of information on specific procedures to

follow. For a small facility with a limited number of hazard scenarios, the core plan may contain most if not all of the information necessary to carry out the response thus obviating the need for more detailed annexes. The checklists, depending on their size and complexity, can be in either the core or the support section.

The core plan should reflect a hierarchy of emergency response levels. A system of response levels is commonly used in emergency planning for classifying emergencies according to seriousness and assigning an appropriate standard response or series of response actions to each level. Both complex and simple industrial facilities use a system of response levels for rapidly assessing the seriousness of an emergency and developing an appropriate response. This process allows response personnel to match the emergency and its potential impacts with appropriate resources and personnel. The concept of response levels should be considered in developing checklists or flowcharts designed to serve as the basis for the core plan. Note that for those facilities subject to planning requirements under OPA, response levels in the core plan may not necessarily correspond to discharge planning amounts (e.g., average most probable discharge, maximum most probable discharge, and worst case discharge).

Facility owners and operators should determine appropriate response levels based on 1) the need to initiate time-urgent response actions to minimize or prevent unacceptable consequences to the health and safety of workers, the public, or the environment; and 2) the need to communicate critical information concerning the emergency to offsite authorities. The consideration and development of response levels should, to the extent practicable, be consistent with similar efforts that may have been taken by the LEPC, local Area Committee, or mutual aid organization. Response levels, which are used in communications with offsite authorities, should be fully coordinated and use consistent terminology.

Annexes

The annexes are designed to provide key supporting information for conducting an emergency response under the core plan as well as document compliance with regulatory requirements not addressed elsewhere in the ICP. Annexes are not meant to duplicate information that is already contained in the core plan, but to augment core plan information. The annexes should relate to the basic

headings of the core plan. To accomplish this, the annexes should contain sections on facility information, notification, and a detailed description of response procedures under the response management system (i.e., command, operations, planning, logistics, and finance). The annexes should also address issues related to post accident investigation, incident history, written follow-up reports, training and exercises, plan critique and modification process, prevention, and regulatory compliance, as appropriate.

The ICP format contained in this guidance is based on the NIIMS ICS. If facility owners or operators choose to follow fundamental principles of the NIIMS ICS, then they may adopt NIIMS ICS by reference rather than having to describe the system in detail in the plan. The owner or operator should identify where NIIMS ICS documentation is kept at the facility and how it will be accessed if needed by the facility or requested by the reviewing agency. Regardless of the response management system used, the plan should include an organization chart, specific job descriptions,³ a description of information flow ensuring liaison with the on-scene coordinator (OSC), and a description of how the selected response management system integrates with a Unified Command.⁴ If a system other than NIIMS ICS is used, the plan should also identify how it differs from NIIMS or provide a detailed description of the system used.

The NRT anticipates that the use of linkages (i.e., references to other plans) when developing annexes will serve several purposes. Linkages will facilitate integration with other emergency plans within a facility (until such plans can be fully incorporated into the ICP) and

with external plans, such as LEPC plans and Area Contingency Plans (ACPs). Linkages will also help ensure that the annexes do not become too cumbersome. The use of references to information contained in external plans does not relieve facilities from regulatory requirements to address certain elements in a facility-specific manner and to have information readily accessible to responders. When determining what information may be linked by reference and what needs to be contained in the ICP, response planners should carefully consider the time critical nature of the information. If instructions or procedures will be needed immediately during an incident response, they should be presented for ready access in the ICP. The following information would not normally be well-suited for reference to documents external to the ICP: core plan elements, facility and locality information (to allow for quick reference by responders on the layout of the facility and the surrounding environment and mitigating actions for the specific hazard(s) present), notification procedures, details of response management personnel's duties, and procedures for establishing the response management system. Although linkages provide the opportunity to utilize information developed by other organizations, facilities should note that many LEPC plans and ACPs may not currently possess sufficient detail to be of use in facility plans or the ICP. This information may need to be developed by the facility until detailed applicable information from broader plans is available.

In all cases, referenced materials must be readily available to anticipated plan users. Copies of documents that have been incorporated by reference need not be submitted unless it is required by regulation. The appropriate sections of referenced documents that are unique to the facility, those that are not nationally recognized, those that are required by regulation, and those that could not reasonably be expected to be in the possession of the reviewing agency, should be provided when the plan is submitted for review and/or approval. Discretion should be used when submitting documents containing proprietary data. It is, however, necessary to identify in the ICP the specific section of the document being incorporated by reference, where the document is kept, and how it will be accessed if needed by the facility or requested by the reviewing agency. In addition, facility owners or operators are reminded to take note of submission

requirements of specific regulations when determining what materials to provide an agency for review as it may not be necessary to submit all parts of an ICP to a particular agency.

As discussed previously, this guidance contains a series of matrices designed to assist owners and operators in the plan consolidation process and in the process of ensuring and documenting compliance with regulatory requirements. The matrix in Attachment 2 to this guidance displays areas of current regulations that align with the suggested elements contained in this guidance document. When addressing each element of the ICP outline, plan drafters can refer to this matrix to identify specific regulatory requirements related to that element. The matrices in Attachment 3 to this guidance display regulatory requirements as contained in each of the regulations listed in the NRT policy statement above (which are applicable to many facilities) along with an indication of where in the suggested ICP outline these requirements should be addressed. If a facility chooses to follow the ICP outline, these matrices can be included as Annex 8 to a facility's ICP to provide the necessary cross-reference for plan reviewers to document compliance with various regulatory requirements. To the extent that a plan deviates from the suggested ICP outline, plan drafters will have to alter the matrices to ensure that the location of regulatory requirements within the ICP is clearly identified for plan reviewers.

Integrated Contingency Plan Elements

Presented below is a list of elements to be addressed in the ICP and a brief explanation, displayed in italicized text, of the nature of the information to be contained in that section of the ICP. Attachment 1 presents the complete outline of the ICP without the explanatory text. As discussed previously, the elements are organized into three main sections: plan introduction, core plan, and response annexes.

Section I—Plan Introduction Elements

1. Purpose and Scope of Plan Coverage

This section should provide a brief overview of facility operations and describe in general the physical area, and nature of hazards or events to which the plan is applicable. This brief description will help plan users quickly assess the relevancy of the plan to a particular type of emergency in a given location. This section should also include a list of which regulation(s) are being addressed in the ICP.

³ OPA 90 planning requirements for marine transfer facilities (33 CFR 154.1035) require job descriptions for each spill management team member regardless of the response management system employed by the facility.

⁴ Under NIIMS ICS, the command module has traditionally been represented by a single incident commander (supported by a command staff) who directs efforts of and receives input from the four supporting functional areas (planning, logistics, operations, and finance). More recently, a Unified Command System as described in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) found at 40 CFR part 300 has been used for larger spill responses where the command module is comprised of representatives from the federal government (i.e., federal on-scene coordinator), state government (state on-scene coordinator), and the responsible party working in a cooperative manner. Unified Command allows all parties who have jurisdictional or functional responsibility for the incident to jointly develop a common set of incident objectives and strategies. Such coordination should be guided by procedures found in the NCP (see figure 1a at 40 CFR 300.105(e)(1)) and the applicable Area Contingency Plan.

2. Table of Contents

This section should clearly identify the structure of the plan and include a list of annexes. This will facilitate rapid use of the plan during an emergency.

3. Current Revision Date

This section should indicate the date that the plan was last revised to provide plan users with information on the currency of the plan. More detailed information on plan update history (i.e., a record of amendments) may be maintained in Annex 6 (Response Critique and Plan Review and Modification Process).

4. General Facility Identification Information

- a. Facility name
- b. Owner/operator/agent (include physical and mailing address and phone number)
- c. Physical address of the facility (include county/parish/borough, latitude/longitude, and directions)
- d. Mailing address of the facility (correspondence contact)
- e. Other identifying information (e.g., ID numbers, SIC Code, oil storage start-up date)
- f. Key contact(s) for plan development and maintenance
- g. Phone number(s) for key contact(s)
- h. Facility phone number
- i. Facility fax number

This section should contain a brief profile of the facility and its key personnel to facilitate rapid identification of key administrative information.

Section II - Core Plan Elements

1. Discovery

This section should address the initial action the person(s) discovering an incident will take to assess the problem at hand and access the response system. Recognition, basic assessment, source control (as appropriate), and initial notification of proper personnel should be addressed in a manner that can be easily understood by everybody in the facility. The use of checklists or flowcharts is highly recommended.

2. Initial Response

- a. Procedures for internal and external notifications (i.e., contact, organization name, and phone number of facility emergency response coordinator, facility response team personnel, federal, state, and local officials)
- b. Establishment of a response management system
- c. Procedures for preliminary assessment of the situation,

including an identification of incident type, hazards involved, magnitude of the problem, and resources threatened

- d. Procedures for establishment of objectives and priorities for response to the specific incident, including:
 - (1) Immediate goals/tactical planning (e.g., protection of workers and public as priorities)
 - (2) Mitigating actions (e.g., discharge/release control, containment, and recovery, as appropriate)
 - (3) Identification of resources required for response
- e. Procedures for implementation of tactical plan
- f. Procedures for mobilization of resources

This section should provide for activation of the response system following discovery of the incident. It should include an established 24-hour contact point (i.e., that person and alternate who is called to set the response in motion) and instructions for that person on who to call and what critical information to pass. Plan drafters should also consider the need for bilingual notification. It is important to note that different incident types require that different parties be notified. Appropriate federal, State, and local notification requirements should be reflected in this section of the ICP.

Detailed notification lists may be included here or in Annex 2, depending upon the variety of notification schemes that a facility may need to implement. For example, the release of an extremely hazardous substance will require more extensive notifications (i.e., to State Emergency Response Commissions (SERCs) and LEPCs) than a discharge of oil. Even though no impacts or awareness are anticipated outside the site, immediate external notifications are required for releases of CERCLA and EPCRA substances. Again, the use of forms, such as flowcharts, checklists, call-down lists, is recommended.

This section should instruct personnel in the implementation of a response management system for coordinating the response effort. More detailed information on specific components and functions of the response management system (e.g., detailed hazard assessment, resource protection strategies) may be provided in annexes to the ICP.

This part of the plan should then provide information on problem assessment, establishment of objectives and priorities, implementation of a tactical plan, and mobilization of resources. In establishing objectives and

priorities for response, facilities should perform a hazard assessment using resources such as Material Safety Data Sheets (MSDSs) or the Chemical Hazard Response Information System (CHRIS) manual. Hazardous Materials Emergency Planning Guide (NRT-1), developed by the NRT to assist community personnel with emergency response planning, provides guidance on developing hazard analyses. If a facility elects to provide detailed hazard analysis information in a response annex, then a reference to that annex should be provided in this part of the core plan.

Mitigating actions must be tailored to the type of hazard present. For example, containment might be applicable to an oil spill (i.e., use of booming strategies) but would not be relevant to a gas release. The plan holder is encouraged to develop checklists, flowcharts, and brief descriptions of actions to be taken to control different types of incidents. Relevant questions to ask in developing such materials include:

- What type of emergency is occurring?
- What areas/resources have been or will be affected?
- Do we need an exclusion zone?
- Is the source under control?
- What type of response resources are needed?

3. Sustained Actions

This section should address the transition of a response from the initial emergency stage to the sustained action stage where more prolonged mitigation and recovery actions progress under a response management structure. The NRT recognizes that most incidents are able to be handled by a few individuals without implementing an extensive response management system. This section of the core plan should be brief and rely heavily on references to specific annexes to the ICP.

4. Termination and Follow-Up Actions

This section should briefly address the development of a mechanism to ensure that the person in charge of mitigating the incident can, in coordination with the federal or state OSC as necessary, terminate the response. In the case of spills, certain regulations may become effective once the "emergency" is declared over. The section should describe how the orderly demobilization of response resources will occur. In addition, follow-up actions associated with termination of a response (e.g., accident investigation, response critique, plan review, written follow-up reports) should also be outlined in this section. Plan drafters

may reference appropriate annexes to the ICP in this section of the core plan.

Section III—Annexes

Annex 1. Facility and Locality Information

- a. Facility maps
- b. Facility drawings
- c. Facility description/layout, including identification of facility hazards and vulnerable resources and populations on and off the facility which may be impacted by an incident

This annex should provide detailed information to responders on the layout of the facility and the surrounding environment. The use of maps and drawings to allow for quick reference is preferable to detailed written descriptions. These should contain information critical to the response such as the location of discharge sources, emergency shut-off valves and response equipment, and nearby environmentally and economically sensitive resources and human populations (e.g., nursing homes, hospitals, schools). The ACP and LEPC plan may provide specific information on sensitive environments and populations in the area. EPA Regional Offices, Coast Guard Marine Safety Offices, and LEPCs can provide information on the status of efforts to identify such resources. Plan holders may need to provide additional detail on sensitive areas near the facility. In addition, this annex should contain other facility information that is critical to response and should complement but not duplicate information contained in part 4 of the plan introduction section containing administrative information on the facility.

Annex 2. Notification

- a. Internal notifications
- b. Community notifications
- c. Federal and state agency notifications

This annex should detail the process of making people aware of an incident (i.e., who to call, when the call must be made, and what information/data to provide on the incident). The incident commander is responsible for ensuring that notifications are carried out in a timely manner but is not necessarily responsible for making the notifications. ACPs, Regional Contingency Plans (RCPs), and LEPC plans should be consulted and referenced as a source of information on the roles and responsibilities of external parties that are to be contacted. This information is important to help company responders understand how external response officials fit into the picture. Call-down lists must be readily accessible to ensure

rapid response. Notification lists provided in the core plan need not be duplicated here but need to be referenced.

Annex 3. Response Management System

This annex should contain a general description of the facility's response management system as well as contain specific information necessary to guide or support the actions of each response management function (i.e., command, operations, planning, logistics, and finance) during a response.

a. General

If facility owners or operators choose to follow the fundamental principles of NIIMS ICS (see discussion of annexes above), then they may adopt NIIMS ICS by reference rather than having to describe the response management system in detail in the plan. In this section of Annex 3, planners should briefly address either 1) basic areas where their response management system is at variance with NIIMS ICS or 2) how the facility's organization fits into the NIIMS ICS structure. This may be accomplished through a simple organizational diagram.

If facility owners or operators choose not to adopt the fundamental principles of NIIMS ICS, this section should describe in detail the structure of the facility response management system. Regardless of the response management system used, this section of the annex should include the following information:

- Organizational chart;
- Specific job description for each position;⁵
- A detailed description of information flow; and
- Description of the formation of a unified command within the response management system.

b. Command

(1) List facility Incident Commander and Qualified Individual (if applicable) by name and/or title and provide information on their authorities and duties.

This section of Annex 3 should describe the command aspects of the response management system that will be used (i.e., reference NIIMS ICS or detail the facility's response management system). The location(s) of predesignated command posts should also be identified.

⁵ OPA 90 planning requirements for marine transfer facilities (33 CFR 154.1035) require job descriptions for each spill management team member regardless of the response management system employed by the facility.

(2) Information (i.e., internal and external communications).

This section of Annex 3 should address how the facility will disseminate information internally (i.e., to facility/response employees) and externally (i.e., to the public). For example, this section might address how the facility would interact with local officials to assist with public evacuation and other needs. Items to consider in developing this section include press release statement forms, plans for coordination with the news media, community relations plan, needs of special populations, and plans for families of employees.

(3) Safety.

This section of Annex 3 should include a process for ensuring the safety of responders. Facilities should reference responsibilities of the safety officer, federal/state requirements (e.g., HAZWOPER), and safety provisions of the ACP. Procedures for protecting facility personnel should be addressed (i.e., evacuation signals and routes, sheltering in place).

(4) Liaison—Staff Mobilization.

This section of Annex 3 should address the process by which the internal and external emergency response teams will interact. Given that parallel mobilization may be occurring by various response groups, the process of integration (i.e., unified command) should be addressed. This includes a process for communicating with local emergency management especially where safety of the general public is concerned.

c. Operations

- (1) Operational response objectives
- (2) Discharge or release control
- (3) Assessment/monitoring
- (4) Containment
- (5) Recovery
- (6) Decontamination
- (7) Non-responder medical needs, including information on ambulances and hospitals
- (8) Salvage plans

This section of Annex 3 should contain a discussion of specific operational procedures to respond to an incident. It is important to note that response operations are driven by the type of incident. That is, a response to an oil spill will differ markedly from a response to a release of a toxic gas to the air. Plan drafters should tailor response procedures to the particular hazards in place at the facility. A facility with limited hazards may have relatively few procedures. A larger more complex facility with numerous hazards is likely to have a series of procedures

designed to address the nuances associated with each type of incident.

d. Planning

(1) Hazard assessment, including facility hazards identification, vulnerability analysis, prioritization of potential risks.

This section of Annex 3 should present a detailed assessment of all potential hazards present at the facility, an analysis of vulnerable receptors (e.g., human populations, both workers and the general public, environmentally sensitive areas, and other facility-specific concerns) and a discussion of which risks deserve primary consideration during an incident. NRT-1 contains guidance on conducting a hazard analysis. Also, ACPs and LEPC plans may provide information on environmentally sensitive and economically important areas, human populations, and protection priorities. Plan drafters should address the full range of risks present at the facility. By covering actions necessary to respond to a range of incident types, plan holders can be prepared for small, operational discharges and large catastrophic releases. One approach that is required by certain regulations, such as the Clean Air Act (CAA) and OPA is to develop planning scenarios for certain types and sizes of releases (i.e., worst case discharge). Facilities may address such planning scenarios and associated calculations in this section of Annex 3 or as part of a separate annex depending on the size and complexity of the facility.

(2) Protection

This section of Annex 3 should present a discussion of strategies for protecting the vulnerable receptors identified through the hazard analysis. Primary consideration should be given to minimizing those risks identified as a high priority. Activities to be considered in developing this section include: population protection; protective booming; dispersant use, in-situ burning, bioremediation; water intake protection; wildlife recovery/rehabilitation; natural remediation; vapor suppression; and monitoring, sampling, and modeling. ACPs and LEPC plans may contain much of this information.

(3) Coordination with natural resource trustees.

This section should address coordination with government natural resource trustees. In their role as managers of and experts in natural resources, trustees assist the federal OSC in developing or selecting removal actions to protect these resources. In this role, they serve as part of the

response organization working for the federal OSC. A key area to address is interaction with facility response personnel in protection of natural resources.

Natural resource trustees are also responsible to act on behalf of the public to present a claim for and recover damages to natural resources injured by an oil spill or hazardous substance release. The process followed by the natural resource trustees, natural resource damage assessment (NRDA), generally involves some data collection during emergency response. NRDA regulations provide that the process may be carried out in cooperation with the responsible party. Thus, the facility may wish to plan for how that cooperation will occur, including designation of personnel to work with trustees in NRDA.

(4) Waste management.

This section should address procedures for the disposal of contaminated materials in accordance with federal, state, and local requirements.

e. Logistics

- (1) Medical needs of responders
- (2) Site security
- (3) Communications (internal and external resources)
- (4) Transportation (air, land, water)
- (5) Personnel support (e.g., meals, housing, equipment)
- (6) Equipment maintenance and support

This section of the Annex 3 should address how the facility will provide for the operational needs of response operations in each of the areas listed above. For example, the discussion of personnel support should address issues such as: volunteer training; management; overnight accommodations; meals; operational/administrative spaces; and emergency procedures. The NRT recognizes that certain logistical considerations may not be applicable to small facilities with limited hazards.

f. Finance/procurement/administration

- (1) Resource list
- (2) Personnel management
- (3) Response equipment
- (4) Support equipment
- (5) Contracting
- (6) Claims procedures
- (7) Cost documentation

This section of Annex 3 should address the acquisition of resources (i.e., personnel and equipment) for the response and monitoring of incident-related costs. Lists of available equipment in the local and regional area and how to procure such equipment as necessary should be

included. Information on previously established agreements (e.g., contracts) with organizations supplying personnel and equipment (e.g., oil spill removal organizations) also should be included. This section should also address methods to account for resources expended and to process claims resulting from the incident.

Annex 4. Incident Documentation

- a. Post accident investigation
- b. Incident history

This annex should describe the company's procedures for conducting a follow-up investigation of the cause of the accident, including coordination with federal, State, and local officials. This annex should also contain an accounting of incidents that have occurred at the facility, including information on cause, amount released, resources impacted, injuries, response actions, etc. This annex should also include information that may be required to prove that the facility met its legal notification requirements with respect to a given incident, such as a signed record of initial notifications and certified copies of written follow-up reports submitted after a response.

Annex 5. Training and Exercises/Drills

This annex should contain a description of the training and exercise program conducted at the facility as well as evidence (i.e., logs) that required training and exercises have been conducted on a regular basis. Facilities may follow appropriate training or exercise guidelines (e.g., National Preparedness for Response Exercise Program Guidelines) as allowed under the various regulatory requirements.

Annex 6. Response Critique and Plan Review and Modification Process

This annex should describe procedures for modifying the plan based on periodic plan review or lessons learned through an exercise or a response to an actual incident. Procedures to critique an actual or simulated response should be a part of this discussion. A list of plan amendments (i.e., history of updates) should also be contained in this annex. Plan modification should be viewed as a part of a facility's continuous improvement process.

Annex 7. Prevention

Some federal regulations that primarily address prevention of accidents include elements that relate to contingency planning (e.g., EPA's RMP and SPCC regulations and OSHA's Process Safety Standard). This annex is designed to allow facilities to include

prevention-based requirements (e.g., maintenance, testing, in-house inspections, release detection, site security, containment, fail safe engineering) that are required in contingency planning regulations or that have the potential to impact response activities covered in a contingency plan. The modular nature of the suggested plan outline provides planners with necessary flexibility to include prevention requirements in the ICP. This annex may not need to be submitted to regulatory agencies for review.

Annex 8. Regulatory Compliance and Cross-Reference Matrices

This annex should include information necessary for plan reviewers to determine compliance with specific regulatory requirements. To the extent that plan drafters did not include regulatory required elements in the balance of the ICP, they should be addressed in this annex. This annex should also include signatory pages to convey management approval and certifications required by the regulations, such as certification of adequate response resources and/or statements of regulatory applicability as required by regulations under OPA authority. Finally, this annex should contain cross-references that indicate where specific regulatory requirements are addressed in the ICP for each regulation covered under the plan. As discussed previously, Attachment 3 contains a series of matrices designed to fulfill this need in those instances where plan drafters adhere to the outline contained in this guidance.

Attachment 1—ICP Outline

Section I—Plan Introduction Elements

1. Purpose and Scope of Plan Coverage
2. Table of Contents
3. Current Revision Date
4. General Facility Identification Information
 - a. Facility name
 - b. Owner/operator/agent (include physical and mailing address and phone number)
 - c. Physical address of the facility (include county/parish/borough, latitude/longitude, and directions)

- d. Mailing address of the facility (correspondence contact)
- e. Other identifying information (e.g., ID numbers, SIC Code, oil storage start-up date)
- f. Key contact(s) for plan development and maintenance
- g. Phone number for key contact(s)
- h. Facility phone number
- i. Facility fax number

Section II—Core Plan Elements

1. Discovery
2. Initial Response
 - a. Procedures for internal and external notifications (i.e., contact, organization name, and phone number of facility emergency response coordinator, facility response team personnel, federal, state, and local officials)
 - b. Establishment of a response management system
 - c. Procedures for preliminary assessment of the situation, including an identification of incident type, hazards involved, magnitude of the problem, and resources threatened
 - d. Procedures for establishment of objectives and priorities for response to the specific incident, including:
 - (1) Immediate goals/tactical planning (e.g., protection of workers and public as priorities)
 - (2) Mitigating actions (e.g., discharge/release control, containment, and recovery, as appropriate)
 - (3) Identification of resources required for response
 - e. Procedures for implementation of tactical plan
 - f. Procedure for mobilization of resources
3. Sustained Actions
4. Termination and Follow-Up Actions

Section III—Annexes

Annex 1. Facility and Locality Information

- a. Facility maps
- b. Facility drawings
- c. Facility description/layout, including identification of facility hazards and vulnerable resources and populations on and off the facility which may be impacted by an incident

Annex 2. Notification

- a. Internal notifications
- b. Community notifications
- c. Federal and state agency notifications

Annex 3. Response Management System

- a. General
- b. Command

- (1) List facility Incident Commander and Qualified Individual (if applicable) by name and/or title and provide information on their authorities and duties
- (2) Information (i.e., internal and external communications)
- (3) Safety
- (4) Liaison—Staff mobilization
- c. Operations
 - (1) Operational response objectives
 - (2) Discharge or release control
 - (3) Assessment/monitoring
 - (4) Containment
 - (5) Recovery
 - (6) Decontamination
 - (7) Non-responder medical needs including information on ambulances and hospitals
 - (8) Salvage plans
- d. Planning
 - (1) Hazard assessment, including facility hazards identification, vulnerability analysis, prioritization of potential risks
 - (2) Protection
 - (3) Coordination with natural resource trustees
 - (4) Waste management
- e. Logistics
 - (1) Medical needs of responders
 - (2) Site security
 - (3) Communications (internal and external resources)
 - (4) Transportation (air, land, water)
 - (5) Personnel support (e.g., meals, housing, equipment)
 - (6) Equipment maintenance and support
- f. Finance/procurement/administration
 - (1) Resource list
 - (2) Personnel management
 - (3) Response equipment
 - (4) Support equipment
 - (5) Contracting
 - (6) Claims procedures
 - (7) Cost documentation

Annex 4. Incident Documentation

- a. Post accident investigation
- b. Incident history

Annex 5. Training and Exercises/Drills

Annex 6. Response Critique and Plan Review and Modification Process

Annex 7. Prevention

Annex 8. Regulatory Compliance and Cross-Reference Matrices

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Attachment 2: ICP Development Matrix

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
Section I - Plan Introduction Elements							
1. Purpose and scope of plan coverage	264.51 265.51 279.52(b)(1) 264.52(a) 265.52(a) 279.52(b)(2)(i)				38(a)(1) ¹ 119(n) 272(d)	(l) ² (p)(8) (q)(1)	
2. Table of contents		112.20(h) Appendix F	1035(a)(4) ³ 1030(b)	Appendix A			
3. Current revision date		F1.2	1035(a)(6)				
4. General facility identification information		F1.2 F1.9		194.107(d)(1)(i) 194.113 194.113(b)(1)			
a. Facility name		F1.2	1035(a)(1)				
b. Owner/operator/ agent		F1.2 F2.0	1035(a)(3)	194.113(a)(1) A-1			
c. Physical address and directions		112.20(h)(2) F1.2 F2.0	1035(a)(1) 1035(a)(2) 1035(e)	194.113(a)(2) 194.113(b)(3)(4) A-1			
d. Mailing address		112.20(h)(2)	1035(a)(1)	194.113(a)(1)			
e. Other identifying information							

¹ All citations refer to part 1910 unless otherwise noted.² All citations refer to 29 CFR 1910.120 unless otherwise noted.³ All citations refer to part 154 unless otherwise noted.

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
f. Key contact(s) for plan development and maintenance					38(a)(2)(vi)	(l)(2)(i),(ii) (p)(8)(ii)(A),(B) (q)(2)(i),(ii)	
g. Phone number for key contact(s)							
h. Facility phone number		F1.2 F2.1	1035(a)(1)				
i. Facility fax number			1035(a)(1)				
Section II - Core Plan Elements							
1. Discovery		112.20(b)(6) F1.6.1, F1.6.2	1035(b)(3)(i)	194.107(d)(1)(iii) A-3	119(n)	(l)(2)(iii) (p)(8)(ii)(C) (q)(2)(iii)	68.95(a)(1)(iii)
2. Initial response		112.20(b)(7)(i) F1.3.6 F1.7	1035(b)(2)(ii) 1035(b)(3)(i) 1035(b)(3)(ii)	A-2	38(a)(2)(i) 38(a)(2)(ii) 119(n)	(l)(2)(ix) (p)(8)(ii)(I) (q)(2)(ix)	68.95(a)(1)(iii)
a. Procedures for internal and external notifications	264.52(d) 265.52(d) 279.52(b)(2)(iv) 264.55 265.55 279.52(b)(5) 264.56(a)(1),(2) 265.56(a)(1),(2) 279.52(b)(6)(i)(A),(B) 264.56(d)(1),(2) 265.56(d)(1),(2) 279.52(b)(6)(iv)(A),(B)	112.20(b)(1)(iii) 112.20(b)(3)(iii) 112.20(b)(3)(iii) 112.20(b)(3)(iv) F1.2 F1.3.1	1026 1035(a)(3) 1035(b)(1)(i) 1035(e)(2)	194.107(d)(1)(ii) 194.113(b)(2) A-1, A-1(b)(2) A-2 A-5	38(a)(2)(v) 38(a)(2)(vi) 38(a)(3)(i) 38(a)(3)(ii) 165	(l)(2)(ix) (p)(8)(ii)(I) (q)(2)(ix)	68.95(a)(1)(i)
b. Establishment of a response management structure	264.37 265.37 279.52(a)(6) 264.52(c) 265.52(c) 279.52(b)(2)(iii)	112.20(b)(1)(v) 112.20(b)(3)(v) F1.3.4	1035(b)(3)(iii)	194.107(d)(1)(v) A-4 A-9		(l)(2)(i),(ii) (p)(8)(ii)(A),(B) (q)(2)(i),(ii) (q)(3)(i)	
c. Preliminary assessment	264.56(b),(c) 265.56(b),(c) 279.52(b)(6)(iii),(iii)	112.20(b)(3)(ix) 112.20(b)(4) F1.4, F1.4.2	1035(b)(3) 1035(b)(4)(i)	194.107(d)(1)(ii)	38(a)(2)(i) 38(a)(2)(ii)	(l)(2)(i) (l)(3)(vii) (p)(8)(ii)(A) (q)(2)(i) (q)(3)(ii),(iii)	

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSFA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
d. Establishment of objectives and priorities for response, including: (1) Immediate goals/tactical planning (2) Mitigating actions (3) Response resources	264.52(e) 265.52(e) 279.52(b)(2)(v)	112.20(h)(1)(iv) 112.20(h)(1)(vii) 112.20(h)(3)(vi) 112.20(h)(3)(ix) 112.20(h)(7) F1.3.2 F1.7.1, F1.7.3	1035(b)(2) 1035(b)(3)(v)(v)	194.107(d)(1)(iii) 194.107(d)(1)(v)	38(a)(4) 119(n)	(1)(2)(vi),(viii) (p)(8)(ii)(F),(H) (q)(2)(vi),(viii) (p)(8)(iv)(F) (q)(3)(ii),(iii),(iv),(vi),(vii)	
e. Implementation of tactical plan	264.52(e) 265.52(e) 279.52(b)(2)(v)	112.20(h)(3)(ix) 112.20(h)(7)	1035(b)(2)(iii) 1035(b)(3) 1035(b)(4)(iii)	194.107(d)(1)(v) A-3	38(a)(2)(ii)	(1)(3)(vii) (p)(8)(iv)(F) (q)(3)(iii)	
f. Mobilization of resources	264.52(e) 265.52(e) 279.52(b)(2)(v)	112.20(h)(7) F1.7.1	1035(b)(2)(iii) 1035(b)(3) 1035(b)(4)(iii)	194.115 194.107(d)(1)(v) A-1 A-3		(1)(2)(ix) (p)(8)(ii)(I) (q)(2)(ix)	
3. Sustained actions		112.20(h)(7)	1035(b)(3)	194.107(d)(1)(v) A-9	38(a)(2)(iii)	(1)(2)(x) (p)(8)(ii)(J) (q)(2)(x)	68.95(a)(1)(iii)
4. Termination and follow-up actions	264.56(i) 265.56(i)	112.20(h)(7)	1035(b)(3)			(1)(2)(ix) (p)(8)(ii)(I) (q)(2)(ix)	68.95(a)(1)(iii)
Section III - Annexes							
1. Facility and locality information		112.20(h)(2) F1.2 F2.0	1035(a) 1035(e)(1)	194.107(d)(1)(i) 194.113 194.113(b)(1)			
a. Facility maps		112.20(h)(1)(viii) F1.9		194.113(b)(2) A-9			
b. Facility drawings		112.20(h)(1)(viii) 112.20(h)(9) F1.9	1035(e)	A-9			
c. Facility description/layout		F1.9	1035(b)(4)	A-9		(1)(3)(i)(A) (p)(8)(iv)(A)(1)	

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
2. Notification	264.52(d) 265.52(d) 279.52(b)(2)(iv) 264.56(a)(1),(2) 265.56(a)(1),(2) 279.52(b)(6)(i)(A),(B) 264.56(d)(1),(2) 265.56(d)(1),(2) 279.52(b)(6)(iv)(A),(B)	112.20(h)(1)(ii)		194.107(d)(1)(ii) A-2	119(n) 165(b)(1) 165(b)(4) 272(d)	(l)(3)(i)(B) (l)(2)(ix) (p)(8)(ii)(I) (p)(8)(iv)(A)(2) (q)(2)(ix)	68.95(a)(1)(i)
a. Internal		112.20(h)(3)(iii) F1.3.1	1035(b)(1)(i) 1035(b)(1)(ii) 1035(e)(2)	194.107(d)(1)(iv)	119(n) 165(b)(1)	(l)(2)(ix) (q)(2)(ix) (p)(8)(ii)(I)	
b. Community		112.20(h)(3)(iii) F1.3.1	1035(b)(1)(i) 1035(b)(1)(ii) 1035(e)(2)		119(n)	(l)(2)(i),(ii),(ix) (p)(8)(ii)(A),(B),(I) (q)(2)(i),(ii),(ix)	
c. Federal and state agency		112.20(h)(3)(iii) 112.20(h)(3)(ix) F1.3.1	1035(b)(1)(i) 1035(b)(1)(ii) 1035(e)(2)	194.107(d)(1)(vi)		(l)(2)(i),(ii),(ix) (p)(8)(ii)(A),(B),(I) (q)(2)(i),(ii),(ix)	
3. Response management structure		112.20(h)(1)(v) 112.20(h)(3)(v) F1.3.4	1035(b)(3)(iii)	194.107(d)(1)(v) A-9		(q)(3)(i)	
a. General	264.52(c) 265.52(c) 279.52(b)(2)(iii)		1035(b)(3)(iii)			(q)(3)(i)	
b. Command		112.20(h)(3)(iv)				(q)(3)(i)	
(1) Facility incident commander and qualified individual	264.55 265.55 279.52(b)(5)	112.20(h)(1)(i) F1.2.5	1026	A-4		(q)(3)(i)	
(2) Information	264.56(a)(1),(2) 265.56(a)(1),(2) 279.52(b)(6)(i)(A),(B)	112.20(h)(3)(iii)	1035(b)(3)(iii) 1035(e)(4)	194.107(d)(1)(v) A-2	38(a)(2)(vi) 38(a)(5)(iii)	(q)(3)(i)	
(3) Safety	264.52(f) 265.52(f) 279.52(b)(2)(vi)	112.20(h)(1)(vi) 112.20(h)(3)(vii) 112.20(h)(3)(viii) F1.3.5	1035(b)(3)(iii) 1035(e)(5)		38(a)(2)(i) 38(a)(2)(iii) 38(a)(2)(iv) 38(a)(4)	(l)(2)(iv),(vi) (p)(8)(ii)(D),(F) (q)(2)(iv),(vi) (q)(3)(vii),(viii)	
(4) Liaison			1035(b)(3)(iii)		38(a)(2)(vi)	(l)(2)(i),(ii) (p)(8)(ii)(A),(B) (q)(2)(i),(ii)	

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
c. Operations							
(1) Response objectives			1035(b)(3)(iii)	194.107(d)(1)(v)	38(a)(2)(i)-(iv)	(q)(3)(iii),(v)	
(2) Discharge or release control	264.56(e) 265.56(e) 279.52(b)(6)(v)	112.200(h)(3)(i) 112.200(h)(7)(iv) 112.200(h)(1)(vii)	1035(b)(2)(iii) 1035(b)(4)(iii)		38(a)(1)	(q)(3)(iii)	
(3) Assessment/monitoring	264.56(b),(c),(d),(f) 265.56(b),(c),(d),(f) 279.52(b)(6)(ii),(iii),(iv),(vi)	112.200(h)(3)(ix) F1.7.1	1035(b)(2)(iii) 1035(b)(3) 1035(b)(4)(iii)		38(a)(3)(ii) 38(a)(4)	(q)(3)(ii)	
(4) Containment	264.56(e) 265.56(e) 279.52(b)(6)(v)	112.200(h)(1)(vii) 112.200(h)(3)(i) 112.200(h)(7)(iv) F1.7.3	1035(b)(2)(iii) 1035(b)(3)(iv) 1035(b)(4)(iii)	194.107(d)(1)(v)			
(5) Recovery		112.200(h)(3)(i) 112.200(h)(7)(iii) F1.7.2	1035(b)(2)(iii) 1035(b)(3)(iv) 1035(b)(4)(iii)	194.107(d)(1)(v)			
(6) Decontamination	264.56(h)(2) 265.56(h)(2) 279.52(b)(6)(viii)(B)	112.200(h)(7)(iii) F1.7.2		194.107(d)(1)(v)		(k) l(2)(vii) p(8)(ii)(G) q(2)(vii) q(3)(ix)	
(7) Non-responder medical needs			1035(e)(5)		38(a)(2)(iv)	l(2)(viii) p(8)(ii)(H) q(2)(viii)	68.95(a)(1)(ii)
(8) Salvage plans				194.107(d)(1)(v)			
d. Planning							
(1) Hazard assessment		112.200(h)(3)(ix) 112.200(h)(4) 112.200(h)(5) 112.200(h)(7)(ii) F1.4.1-F1.4.3 F1.5.1, F1.5.2 112.200(h)(7)(i) 112.200(h)(7)(iv) F1.7.1, F1.7.3	1029 1035(b)(4)(ii)	194.107(a) 194.115	38(a)(1) 38(a)(4)	l(2)(i),(ix) p(8)(ii)(A),(I) q(1) q(2)(i),(ix)	68.20-36 68.50 68.67
(2) Protection			1035(b)(4)			l(2)(iv),(v),(vi) p(8)(ii)(D),(E),(K) q(2)(iv),(v),(vi) q(3)(iii)	

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
(3) Coordination with natural resource trustees		112.20(g)	1030(f)	194.107(c)			
(4) Waste management	264.56(b)(1) 265.56(h)(1) 279.52(b)(6)(viii)(A) 264.56(g) 265.56(g) 279.52(b)(6)(vii)	112.20(h)(7)(iv) F1.7.2	1035(b)(5)	194.107(d)(1)(v)			
e. Logistics			1035(b)(3)(iii)			(l)(3)(iii) (p)(8)(iv)(B) (q)(2)(xii)	
(1) Medical needs			1035(e)(5)		38(a)(2)(iv)	(l)(2)(viii) (p)(8)(ii)(H) (q)(2)(viii)	68.95(a)(1)(ii)
(2) Site security		112.20(h)(10) F1.10				(l)(2)(v) (p)(8)(ii)(E) (q)(2)(v)	
(3) Communications		112.20(h)(1)(iv) 112.20(h)(3)(vi) F1.3.2	1035(e)(3)	194.107(d)(1)(v) A-2	38(a)(3) 119(e)(3)(iii) 165(b)	(q)(3)(i)	
(4) Transportation							
(5) Personnel support		112.20(h)(1)(v) 112.20(h)(1)(vi) 112.20(h)(3)(f-ii) 112.20(h)(3)(v) 112.20(h)(3)(vii) F1.3.5			38(a)(5)(i)	(l)(2)(ii) (p)(8)(ii)(B) (q)(2)(ii) (q)(3)(v), (vi)	
(6) Equipment maintenance and support		112.20(h)(1)(iv) 112.20(h)(3)(vi) 112.20(h)(8) F1.3.3 F1.8.1	1035(b)(3)(iv) 1035(e)(3) 1057	194.107(d)(1)(viii)	119(j)(4) 119(j)(5) 165(d)	(l)(2)(xi) (p)(8)(ii)(K) (q)(2)(xi)	68.95(a)(2)
f. Finance/procurement/administration		112.20(h)(3)(ix)	1028 1035(b)(3)(iii)				
(1) Resource list	264.52(e) 265.52(e) 279.52(b)(2)(v)	112.20(h)(1)(iv) 112.20(h)(3)(vi) F1.3.2 F1.7.1	1035(b)(3)(iv) 1035(e)(3)				
(2) Personnel		112.20(h)(1)(v) 112.20(h)(3)(v) F1.3.4	1035(b)(3)(iv)				

ICP Elements	RCRA (40 CFR part 264, Subpart D, 40 CFR part 265, Subpart D, and 40 CFR 279.52)	EPA's Oil Pollution Prevention Regulation (40 CFR part 112)	USCG-FRP (33 CFR part 154)	DOT/RSPA-FRP (49 CFR part 194)	OSHA Emergency Action Plans (29 CFR 1910.38(a) and Process Safety (29 CFR 1910.119)	OSHA HAZWOPER (29 CFR 1910.120)	CAA RMP (40 CFR part 68)
(3) Response equipment	264.52(e) 265.52(e) 279.52(b)(2)(v)	112.20(h)(1)(iv) 112.20(h)(3)(vi) F1.3.2 F1.7.1	1035(b)(2)(ii) 1035(b)(4)(iii) 1035(e)(3) Appendix C			(1)(2)(xi) (p)(8)(ii)(K) (q)(2)(xi)	
(4) Support equipment	264.52(e) 265.52(e) 279.52(b)(2)(v)	F1.3.2 F1.7.1	1035(e)(3)				
(5) Contracting		112.20(h)(3)(ii)	1028(a)(1) 1035(e)(3)	194.115			
(6) Claims procedures							
(7) Cost documentation							
4. Incident documentation					38(a)(2)(iii) 119(e)(3)(ii)	(1)(2)(x) (p)(8)(ii)(J) (q)(2)(x)	
a. Post-accident investigation	264.56(j) 265.56(j) 279.52(b)(6)(ix)				119(m)	(1)(2)(x) (p)(8)(ii)(J) (q)(2)(x)	68.60 68.81
b. Incident history		112.20(h)(4) F1.4.4			119(e)(3)(ii)		68.42
5. Training and exercises/drills		112.20(h)(8) 112.21 F1.8.2, F1.8.3	1035(c) 1050 1055 Appendix D	194.107(d)(1)(vii) 194.107(d)(1)(ix) 194.117 A-6 A-7	38(a)(5) 119(g)(1)(i)	(1)(3)(iv) (p)(8)(iii) (q)(6)	68.95(a)(3)
6. Response critique and plan review and modification process	264.54 265.54 279.52(b)(4)	112.20(g)	1035(a)(6) 1035(d) 1065	194.107(d)(1)(x) 194.111 194.119 194.121 A-8	119(l) 119(o)(1)	(1)(2)(x) (p)(8)(ii)(J) (q)(2)(x)	68.95(a)(4)
7. Prevention						(1)(2)(iii) (p)(8)(ii)(C) (q)(2)(iii)	

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES

	ICP Citation(s)
RCRA (40 CFR Part 264 Subpart D¹, 40 CFR Part 265 Subpart D², 40 CFR Part 279.52(b)³)	
264.52 Content of contingency plan:	
(a) Emergency response actions. ⁴	
(b) Amendments to SPCC plan.	
(c) Coordination with State and local response parties ⁵	II.2.b; III.3.a.
(d) Emergency coordinator(s)	II.2.a; III.2.
(e) Detailed description of emergency equipment on-site	II.2.d.(3); II.2.e; II.2.f; III.3.f.(1); III.3.f.(3); III.3.f.(4).
(f) Evacuation plan if applicable	III.3.b.(3).
264.53 Copies of contingency plan.	III.6.
264.54 Amendment of contingency plan	II.2.a; III.3.b.(1).
264.55 Emergency coordinator	
264.56 Emergency procedures:	
(a) Notification	II.2.a; III.2; III.3.b.(2).
(b) Emergency identification/characterization	II.2.c; III.3.c.(3).
(c) Health/environmental assessment	II.2.c; III.3.c.(3).
(d) Reporting	II.2.a; III.2; III.3.c.(3).
(e) Containment	III.3.c.(2); III.3.c.(4).
(f) Monitoring	III.3.b.(3); III.3.c.(3).
(g) Treatment, storage, or disposal of wastes	III.3.d.(4).
(h) Cleanup procedures:	
(1) Disposal	III.3.d.(4).
(2) Decontamination	III.3.c.(6).
(i) Follow-up procedures	II.4.
(j) Follow-up report	III.4.a.
265.52 Content of contingency plan:	
(a) Emergency response actions. ⁶	
(b) Amendments to SPCC plan.	
(c) Coordination with State and local response parties ⁷	II.2.b; III.3.a.
(d) Emergency coordinator(s)	II.2.a; III.2.
(e) Detailed description of emergency equipment on-site	II.2.d.(3); II.2.e; II.2.f; III.3.f.(1); III.3.f.(3); III.3.f.(4).
(f) Evacuation plan if applicable	III.3.b.(3).
265.53 Copies of contingency plan.	III.6.
265.54 Amendment of contingency plan	II.2.a; III.3.b.(1).
265.55 Emergency coordinator	
265.56 Emergency procedures:	
(a) Notification	II.2.a; III.2; III.3.b.(2).
(b) Emergency identification/characterization	II.2.c; III.3.c.(3).
(c) Health/environmental assessment	II.2.c; III.3.c.(3).
(d) Reporting	II.2.a; III.2; III.3.c.(3).
(e) Containment	III.3.c.(2); III.3.c.(4).
(f) Monitoring	III.3.b.(3); III.3.c.(3).
(g) Treatment, storage, or disposal of wastes	III.3.d.(4).
(h) Cleanup procedures:	
(1) Disposal	III.3.d.(4).
(2) Decontamination	III.3.c.(6).
(i) Follow-up procedures	II.4.
(j) Follow-up report	III.4.a.
279.52(b)(2) Content of contingency plan:	
(i) Emergency response actions ⁸	
(ii) Amendments to SPCC plan.	
(iii) Coordination with State and local response parties ⁹	II.2.b; III.3.a.
(iv) Emergency coordinator(s)	II.2.a; III.2.
(v) Detailed description of emergency equipment on-site	II.2.d.(3); II.2.e; II.2.f; III.3.f.(1); III.3.f.(3); III.3.f.(4).
(vi) Evacuation plan if applicable	III.3.b.(3).
(3) Copies of contingency plan.	III.6.
(4) Amendment of contingency plan	II.2.a; III.3.b.(1).
(5) Emergency coordinator	
(6) Emergency procedures:	
(i) Notification	II.2.a; III.2; III.3.b.(2).
(ii) Emergency identification/characterization	II.2.c; III.3.c.(3).
(iii) Health/environmental assessment	II.2.c; III.3.c.(3).
(iv) Reporting	II.2.a; III.2; III.3.c.(3).
(v) Containment	III.3.c.(2); III.3.c.(4).
(vi) Monitoring	III.3.b.(3); III.3.c.(3).
(vii) Treatment, storage, or disposal of wastes	III.3.d.(4).
(viii) Cleanup procedures:	
(A) Disposal	III.3.d.(4).
(B) Decontamination	III.3.c.(6).

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
(ix) Follow-up report	III.4.a.
EPA's Oil Pollution Prevention Regulation (40 CFR 112)	
112.7(d)(1) Strong spill contingency plan and written commitment of manpower, equipment, and materials. ^{10,11}	
112.20(g) General response planning requirements	III.3.d.(3); III.6.
112.20(h) Response plan elements	I.2; III.8.
(1) Emergency response action plan (Appendix F1.1):	
(i) Identity and telephone number of qualified individual (F1.2.5)	III.3.b.(1).
(ii) Identity of individuals/organizations to contact if there is a discharge (F1.3.1)	III.2.
(iii) Description of information to pass to response personnel in event of a reportable spill (F1.3).	II.2.a.
(iv) Description of facility's response equipment and its location (F1.3.2)	II.2.d.(3); III.3.e.(3); III.3.e.(6); III.3.f.(1); III.3.f.(3).
(v) Description of response personnel capabilities (F1.3.4)	II.2.b; III.3; III.3.e.(5); III.3.f.(2);
(vi) Plans for evacuation of the facility and a reference to community evacuation plans (F1.3.5).	III.3.b.(3); III.3.e.(5)
(vii) Description of immediate measures to secure the source (F1.7.1)	II.2.d.(2); III.3.c.(2); III.3.c.(4).
(viii) Diagram of the facility (F1.9)	III.1.a–b.
(2) Facility information (F1.2, F2.0)	I.4.b–d; III.1.
(3) Information about emergency responses:	
(i) Identity of private personnel and equipment to remove to the maximum extent practicable a WCD or other discharges (F1.3.2, F1.3.4).	III.3.c.(2); III.3.c.(4)–(5); III.3.e.(5).
(ii) Evidence of contracts or other approved means for ensuring personnel and equipment availability.	III.3.e.(5); III.3.f.(5)
(iii) Identity and telephone of individuals/organizations to be contacted in event of a discharge (F1.3.1).	II.2.a; III.2.b–d; III.3.b.(2).
(iv) Description of information to pass to response personnel in event of a reportable spill (F1.3.1).	II.2.a.
(v) Description of response personnel capabilities (F1.3.4)	II.2.b; III.3; III.3.e.(5); III.3.f.(2).
(vi) Description of a facility's response equipment, location of the equipment, and equipment testing (F1.3.2, F1.3.3).	II.2.d.(3); III.3.e.(3); III.3.e.(6); III.3.f.(1); III.3.f.(3).
(vii) Plans for evacuation of the facility and a reference to community evacuation plans as appropriate (F1.3.5).	III.3.b.(3); III.3.e.(5).
(viii) Diagram of evacuation routes (F1.9).	III.3.b.(3).
(ix) Duties of the qualified individual (F1.3.6)	II.2.c; II.2.d.(1); I.2.e; III.2.b–c; III.3.c.(3); III.3.d.(1); III.3.f.
(4) Hazard evaluation (F1.4)	II.2.c; III.3.d.(1); III.4.b.
(5) Response planning levels (F1.5, F1.5.1, F1.5.2)	II.3.d.(1).
(6) Discharge detection systems (F1.6, F1.6.1, F1.6.2)	II.1.
(7) Plan implementation (F1.7)	II.2.d–f; II.3; II.4.
(i) Response actions to be carried out (F1.7.1.1)	II.2; III.3.d.(2).
(ii) Description of response equipment to be used for each scenario (F1.7.1.1)	III.3.d.(1).
(iii) Plans to dispose of contaminated cleanup materials (F1.7.2)	III.3.c.(5)–(6)
(iv) Measures to provide adequate containment and drainage of spilled oil (F1.7.3)	III.3.c.(2); III.3.c.(4); III.3.d.(2); III.3.d.(4).
(8) Self-inspection, drills/exercises, and response training (F1.8.1–F1.8.3.2)	III.3.e.(6); III.5.
(9) Diagrams (F1.9)	III.1.b.
(10) Security systems (F1.10)	III.3.e.(2).
(11) Response plan cover sheet (F2.0).	
112.21 Facility response training and drills/exercises (F1.8.2, F1.8.3)	III.5.
Appendix F Facility-Specific Response Plan: ¹²	I.2.
1.0 Model Facility-Specific Response Plan.	
1.1 Emergency Response Action Plan.	
1.2 Facility Information	I.3; I.4.a; I.4.b–c; I.4.h; II.2.a; III.1.
1.3 Emergency Response Information:	
1.3.1 Notification	II.2.a; III.2.a–c.
1.3.2 Response Equipment List	II.2.d.(3); III.3.e.(3); III.3.f.(1); III.3.f.(3)–(4).
1.3.3 Response Equipment Testing/Deployment	III.3.e.(6).
1.3.4 Personnel	II.2.b; III.3; III.3.f.(2).
1.3.5 Evacuation Plans	III.3.b.(3); III.3.e.(5).
1.3.6 Qualified Individual's Duties	II.2.
1.4 Hazard Evaluation	II.2.c.
1.4.1 Hazard Identification	III.1.c; III.3.d.(1).
1.4.2 Vulnerability Analysis	II.2.c; III.3.d.(1).
1.4.3 Analysis of the Potential for an Oil Spill	III.3.d.(1).
1.4.4 Facility Reportable Oil Spill History	III.4.b.
1.5 Discharge Scenarios:	
1.5.1 Small and Medium Discharges	III.3.d.(1).
1.5.2 Worst Case Discharge	III.3.d.(1).
1.6 Discharge Detection Systems:	
1.6.1 Discharge Detection By Personnel	II.1.

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
1.6.2 Automated Discharge Detection	II.1.
1.7 Plan Implementation	II.2.
1.7.1 Response Resources for Small, Medium, and Worst Case Spills	II.2.d.(3); II.2.f; III.3.c.(3); III.3.d.(2); III.3.f.(1); III.3.f.(3)–(4).
1.7.2 Disposal Plans	III.3.c.(5)–(6); III.3.d.(4).
1.7.3 Containment and Drainage Planning	II.2.d; III.3.c.(4); III.3.d.(2).
1.8 Self-Inspection, Drills/Exercises, and Response Training:	
1.8.1 Facility Self-Inspection	III.3.e.(6).
1.8.2 Facility Drills/Exercises	III.5.
1.8.3 Response Training	III.5.
1.9 Diagrams	I.4; III.1.a–c.
1.10 Security	III.3.e.(2).
2.0 Response Plan Cover Sheet	I.4.b; I.4.c; I.4.h; III.1.
USCG FRP (33 CFR part 154)	
154.1026 Qualified individual and alternate qualified individual	II.2.a; III.3.b.(1).
154.1028 Availability of response resources by contract or other approved means	III.3.f or III.8; III.3.f.(5).
154.1029 Worst case discharge	III.3.d.(1).
154.1030 General response plan contents:	
(a) The plan must be written in English.	
(b) Organization of the plan ¹³	I.2.
(c) Required contents.	
(d) Sections submitted to COTP.	
(e) Cross-references	III.8.
(f) Consistency with NCP and ACPs	III.3.d.(3).
154.1035 Significant and substantial harm facilities:	
(a) Introduction and plan content	III.1.
(1) Facility's name, physical and mailing address, county, telephone, and fax	I.4.a; I.4.c–d; I.4.h–i
(2) Description of a facility's location in a manner that could aid in locating the facility	I.4.c.
(3) Name, address, and procedures for contacting the owner/operator on 24-hour basis.	I.4.b; II.2.a
(4) Table of contents	I.2.
(5) Cross index, if appropriate	III.8.
(6) Record of change(s) to record information on plan updates	I.3; III.6.
(b) Emergency Response Action Plan:	
(1) Notification procedures:	
(i) Prioritized list identifying person(s), including name, telephone number, and role in plan, to be notified in event of threat or actual discharge.	II.2.a; III.2.a–c.
(ii) Information to be provided in initial and follow-up notifications to federal, state, and local agencies.	III.3.b; III.2.a–c.
(2) Facility's spill mitigation procedures ¹⁴	II.2.d.(2); III.3.c.(2).
(i) Volume(s) of persistent and non-persistent oil groups.	
(ii) Prioritized procedures/task delegation to mitigate or prevent a potential or actual discharge or emergencies involving certain equipment/scenarios.	II.2.
(iii) List of equipment and responsibilities of facility personnel to mitigate an average most probable discharge.	II.2.e–f; III.3.f.(3); III.3.c.(1)–(5).
(3) Facility response activities ¹⁵	II.2.c; II.2.e–f; II.3; II.4; III.3.c.(3).
(i) Description of facility personnel's responsibilities to initiate/supervise response until arrival of qualified individual.	II.1; II.2.
(ii) Qualified individual's responsibilities/authority	II.2.
(iii) Facility or corporate organizational structure used to manage response actions	II.2.b; II.3; III.3.a; III.3.b.(2)–(4); III.3.c; III.3.d.(1); III.3.e–f.
(iv) Oil spill response organization(s)/spill management team available by contract or other approved means.	II.2.d.(3); III.3.c.(4)–(5); III.3.e.(6); III.3.f.(1)–(2); III.3.f.(5).
(v) For mobile facilities that operate in more than one COTP, the oil spill response organization(s)/spill management team in the applicable geographic-specific appendix.	II.2.d.(3).
(4) Fish and wildlife sensitive environments	III.1.c; III.3.d.(1)–(2).
(i) Areas of economic importance and environmental sensitivity as identified in the ACP that are potentially impacted by a WCD.	II.2.c.
(ii) List areas and provide maps/charts and describe response actions.	
(iii) Equipment and personnel necessary to protect identified areas	II.2.e–f; III.3.f.(3); III.3.c.(1)–(5).
(5) Disposal plan	III.3.d.(4).
(c) Training and exercises	III.5.
(d) Plan review and update procedures	III.6.
(e) Appendices	I.4.c; III.1.b.
(1) Facility specific information	III.1.
(2) List of contacts	II.2.a; III.2.a–c; III.3.b.(1).
(3) Equipment lists and records	III.3.e.(3); III.3.e.(6); III.3.f.(1); III.3.f.(3)–(5).
(4) Communications plan	III.3.b.(2).
(5) Site-specific safety and health plan	III.3.b.(3); III.3.c.(7); III.3.e. (1).

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
(6) List of acronyms and definitions.	
(7) A geographic-specific appendix.	
154.1040 Specific requirements for substantial harm facilities.	
154.1041 Specific response information to be maintained on mobile MTR facilities.	
154.1045 Groups I–IV petroleum oils.	
154.1047 Group V petroleum oils.	
154.1050 Training	III.5.
154.1055 Drills	III.5.
154.1057 Inspection and maintenance of response resources	III.3.e.(6).
154.1060 Submission and approval procedures.	
154.1065 Plan revision and amendment procedures	III.6.
154.1070 Deficiencies.	
154.1075 Appeal Process.	
Appendix C—Guidelines for determining and evaluating required response resources for facility response plans.	III.3.f.(3).
Appendix D—Training elements for oil spill response plans	III.5.
DOT/RSPA FRP (49 CFR Part 194)	
194.101 Operators required to submit plans.	
194.103 Significant and substantial harm: operator's statement	III.8.
194.105 Worst case discharge	III.3.d.(1).
194.107 General response plan requirements:	
(a) Resource planning requirements	III.3.d.
(b) Language requirements.	
(c) Consistency with NCP and ACP(s)	III.3.d.(3); III.8.
(d) Each response plan must include:	
(1) Core Plan Contents:	
(i) An information summary as required in 194.113	I.4; III.1.
194.113(a) Core plan information summary:	
(1) Name and address of operator	I.4.b; I.4.d.
(2) Description of each response zone	I.4.c.
(b) Response zone appendix information summary:	
(1) Core plan information summary	I.4; III.1.
(2) Name and address of operator	III.6.
194.121 Response plan review and update procedures	III.6.
Appendix A—Recommended guidelines for the preparation of response plans	I.2.
Section 1—Information summary	I.4.b–c; II.2.a; II.2.f; III.8.
Section 2—Notification procedures	II.2.a; III.2; III.3.b.(2); III.3.e.(3).
Section 3—Spill detection and on-scene spill mitigation procedures	II.1; II.2.e–f; III.3.c.(2).
Section 4—Response activities	II.2.b; III.3.b.(1).
Section 5—List of contacts	II.2.a.
Section 6—Training procedures	III.5.
Section 7—Drill procedures	III.5.
Section 8—Response plan review and update procedures	III.6.
Section 9—Response zone appendices	II.2.b; II.3; III.1.a–c; III.3.
OSHA Emergency Action Plans (29 CFR 1910.38(a)) and Process Safety (29 CFR 1910.119)	
1910.38(a) Emergency action plan:	
(1) Scope and applicability	III.3.c.(1); III.3.d.
(2) Elements:	
(i) Emergency escape procedures and emergency escape route assignments	II.2; II.2.c; III.3.b.(3); III.3.c.
(ii) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate.	II.2; II.2.c; II.2.e; III.3.c.
(iii) Procedures to account for all employees after emergency evacuation has been completed.	II.2.a; III.3.b.(2); III.3.b.(3); III.3.c; III.4.
(iv) Rescue and medical duties for those employees who are to perform them	III.3.b.(3); III.3.c; III.3.c.(7); III.3.e.(1).
(v) The preferred means of reporting fires and other emergencies	II.2.a; III.3.b.
(vi) Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.	I.4.f; II.2.a; III.3.b.(2); III.3.b.(4).
(3) Alarm system ¹⁶	II.2.a; III.3.c.(3); III.3.e.(3).
(4) Evacuation	II.2.d; III.3.b.(3); III.3.c.(3); III.3.d; III.3.d.(1).
(5) Training	III.3.e.(5); III.5.
1910.119 Process safety management of highly hazardous chemicals:	
(e)(3)(ii) Investigation of previous incidents	III.4; III.4.b.
(e)(3)(iii) Process hazard analysis requirements	III.3.e.(3).
(g)(1)(i) Employee training in process/operating procedures	III.5.
(j)(4) Inspection/testing of process equipment	III.3.e.(6).
(j)(5) Equipment repair	III.3.e.(6).
(l) Management of change(s)	III.5.
(m) Incident investigation	III.4.a.

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
(n) Emergency planning and response	I.1; II.1; II.2; II.2.d; III.2; III.2.a; III.2.b.
(o)(1) Certification of compliance	III.6.
1910.165 Employee alarm systems:	
(b) General requirements	III.3.e.(3).
(b)(1) Purpose of alarm system	III.2; III.2.a.
(b)(4) Preferred means of reporting emergencies	III.2.
(d) Maintenance and testing	III.3.e.(6).
1910.272 Grain handling facilities:	
(d) Development/implementation of emergency action plan	I.1; III.2.
OSHA HAZWOPER (29 CFR 1910.120)	
1910.120(k) Decontamination	III.3.c.(6).
1910.120(l) Emergency response program	I.1.
(1) Emergency response plan:	
(i) An emergency response plan shall be developed and implemented by all employers within the scope of this section to handle anticipated emergencies prior to the commencement of hazardous waste operations.	
(ii) Employers who will evacuate their employees from the workplace when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan complying with section 1910.38(a) of this part.	
(2) Elements of an emergency response plan:	
(i) Pre-emergency planning and coordination with outside parties	I.4.f; II.2.b; II.2.c; III.2.b; III.2.c; III.3.b.(4); III.3.d.
(ii) Personnel roles, lines of authority, and communication	I.4.f; II.2.b; III.2.a; III.2.c; III.3.b.(4); III.3.e.(4).
(iii) Emergency recognition and prevention	II.1; III.7.
(iv) Safe distances and places of refuge	III.3.b.(3); III.3.d.(2).
(v) Site security and control	III.3.d.(2); III.3.e.(2).
(vi) Evacuation routes and procedures	II.2.d; III.3.b.(3)
(vii) Decontamination procedures	III.3.c.(6).
(viii) Emergency medical treatment and response procedures	II.2.d; III.3.c.(7); III.3.e.(1).
(ix) Emergency alerting and response procedures	II.2; II.2.a; II.2.f; II.4; III.2; III.2.a; III.2.b; III.2.c; III.3.d.
(x) Critique of response and follow-up	II.3; III.4; III.4.a; III.6.
(xi) PPE and emergency equipment	III.3.e.(6); III.3.f.(3); III.3.d.(2); III.3.e.(6); III.3.f.(3).
(3) Procedures for handling emergency incidents:	
(i) Additional elements of emergency response plans:	
(A) Site topography, layout, and prevailing weather conditions	III.1.c.
(B) Procedures for reporting incidents to local, state, and federal government agencies.	II.2.a; III.2.
(ii) The emergency response plan shall be a separate section of the Site Safety and Health Plan.	
(iii) The emergency response plan shall be compatible with the disaster, fire, and/or emergency response plans of local, state, and federal agencies.	III.3.e.
(iv) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.	III.5.
(v) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.	
(vi) An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation; to stop work activities if necessary; to lower background noise in order to speed communications; and to begin emergency procedures.	
(vii) Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.	II.2.c; II.2.d.
1910.120(p)(8) Emergency response program:	I.1
(i) Emergency response plan.	
(ii) Elements of an emergency response plan:	
(A) Pre-emergency planning and coordination with outside parties	I.4.f; II.2.b; II.2.b; III.2.b; III.2.c; III.3.b.(4); III.3.d.
(B) Personnel roles, lines of authority, and communication	I.4.f; II.2.b; III.2.c; III.2.c; III.3.b.(4); III.3.e.(4).
(C) Emergency recognition and prevention	II.1; III.7
(D) Safe distances and places of refuge	III.3.b.(3); III.3.d.(2)
(E) Site security and control	III.3.d.(2); III.3.e.(2)
(F) Evacuation routes and procedures	II.2.d; III.3.b.(3).
(G) Decontamination procedures	III.3.c.(6).
(H) Emergency medical treatment and response procedures	II.2.d; III.3.c.(7); III.3.e.(1).
(I) Emergency alerting and response procedures	II.2; II.2.a; II.2.f; II.4; III.2; III.2.a; III.2.b; III.2.c; III.3.d.

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
(J) Critique of response and follow-up	II.3; III.4; III.4.a; III.6.
(K) PPE and emergency equipment	III.3.e.(6); III.3.f.(3); III.3.d.(2); III.3.e.(6); III.3.f.(3).
(iii) Training	III.5.
(iv) Procedures for handling emergency incidents:	
(A) Additional elements of emergency response plans:	
(1) Site topography, layout, and prevailing weather conditions	III.1.c; III.3.d.(1).
(2) Procedures for reporting incidents to local, state, and federal government agencies.	II.2.a; III.2.
(B) The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.	III.3.e.
(C) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.	
(D) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.	
(E) An employee alarm system shall be installed in accordance with 29 CFR 1910.165.	
(F) Based upon the information available at the time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan	II.2.d; II.2.e; III.3.d.(1).
1910.120(q) Emergency response to hazardous substance releases:	
(1) Emergency response plan	III.3.1.
(2) Elements of an emergency response plan:	
(i) Pre-emergency planning and coordination with outside parties	I.4.f; II.2.b; II.2.c; III.2.b; III.2.c; III.3.b.(4); III.3.d.
(ii) Personnel roles, lines of authority, training, and communication	I.4.f; II.2.b; III.2.b; III.2.c; III.3.b.(4); III.3.e.(4). II.1; III.7.
(iii) Emergency recognition and prevention	III.3.b.(3); III.3.d.(2).
(iv) Safe distances and places of refuge	III.3.d.(2); III.3.e.(2).
(v) Site security and control	II.2.d; III.3.b.(3).
(vi) Evacuation routes and procedures	III.3.c.(6).
(vii) Decontamination procedures	II.2.d; III.3.c.(7); III.3.e.(1).
(viii) Emergency medical treatment and response procedures	II.2; II.2.a; II.2.f; II.4; III.2; III.2.a; III.2.b; III.2.c; III.3.d.
(ix) Emergency alerting and response procedures	II.3; III.4; III.4.a; III.6.
(x) Critique of response and follow-up	III.3.e.(6); III.3.f.(3); III.3.d.(2); III.3.e.(6); III.3.f.(3).
(xii) Emergency response plan coordination and integration	III.3.e; III.8.
(3) Procedures for handling emergency response:	
(i) The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS).	II.2.b; III.3; III.3.a; III.3.b; III.3.b.(1); III.3.b.(2); III.3.e.(3).
(ii) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.	II.2.c; II.2.d; III.3.c.(3).
(iii) Implementation of appropriate emergency operations and use of PPE	II.2.c; II.2.d; II.2.e; III.3.c; III.3.c.(1); III.3.d.(1); III.3.d.(2).
(iv) Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response.	II.2.d.
(v) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations.	III.3.c; III.3.e.(5).
(vi) Backup personnel shall stand by with equipment ready to provide assistance or rescue.	II.2.d; III.3.e.(5).
(vii) The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site.	II.2.d; III.3.b.(3).
(viii) When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have authority to alter, suspend, or terminate those activities.	III.3.b.(3).
(ix) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.	III.3.c.(6).

ATTACHMENT 3: REGULATORY CROSS-COMPARISON MATRICES—Continued

	ICP Citation(s)
(x) When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. (4) Skilled support personnel. (5) Specialist employees. (6) Training (7) Trainers. (8) Refresher training. (9) Medical surveillance and consultation. (10) Chemical protective clothing. (11) Post-emergency response operations.	III.5.
EPA's Risk Management Program (40 CFR Part 68)	
68.20–36 Offsite consequence analysis	III.3.d.(1).
68.42 Five-year accident history	III.4.b.
68.50 Hazard review	III.3.d.(1).
68.60 Incident investigation	III.4.a
68.67 Process hazards analysis	III.3.d.(1)
68.81 Incident investigation	III.4.a
68.95(a) Elements of an emergency response program:	
(1) Elements of an emergency response plan:	
(i) Procedures for informing the public and emergency response agencies about accidental releases.	II.2.a; III.2.
(ii) Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures.	III.3.c.(7); III.3.e.(1).
(iii) Procedures and measures for emergency response after an accidental release of a regulated substance.	II.1; II.2; II.3; II.4; III.3.a–c.
(2) Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance.	III.3.e.(6).
(3) Training for all employees in relevant procedures	III.5.
(4) Procedures to review and update the emergency response plan	III.6.
68.95(b) Compliance with other federal contingency plan regulations.	
68.95(c) Coordination with the community emergency response plan.	

Notes to Attachment 3

¹ Facilities should be aware that most states have been authorized by EPA to implement RCRA contingency planning requirements in place of the federal requirements listed. Thus, in many cases state requirements may not track this matrix. Facilities must coordinate with their respective states to ensure an ICP complies with state RCRA requirements.

² Facilities should be aware that most states have been authorized by EPA to implement RCRA contingency planning requirements in place of the federal requirements listed. Thus, in many cases state requirements may not track this matrix. Facilities must coordinate with their respective states to ensure an ICP complies with state RCRA requirements.

³ Facilities should be aware that most states have been authorized by EPA to implement RCRA contingency planning requirements in place of the federal requirements listed. Thus, in many cases state requirements may not track this matrix. Facilities must coordinate with their respective states to ensure an ICP complies with state RCRA requirements.

⁴ Section 264.56 is incorporated by reference at § 264.52(a).

⁵ Incorporates by reference § 264.37.

⁶ Section 265.56 is incorporated by reference at § 265.52(a).

⁷ Incorporates by reference § 265.37.

⁸ Section 279.52(b)(6) is incorporated by reference at § 279.52(b)(2)(i).

⁹ Incorporates by reference § 279.52(a)(6).

¹⁰ Non-response planning parts of this regulation (e.g., prevention provisions) require a specified format.

¹¹ If a facility is required to develop a strong oil spill contingency plan under this section, the requirement can be met through the ICP.

¹² The appendix further describes the required elements in 120.20(h). It contains regulatory requirements as well as recommendations.

¹³ Specific plan requirements for sections listed under 154.1030(b) are contained in 154.1035(a)–(g).

¹⁴ Note: Sections 154.1045 and 154.1047 contain requirements specific to facilities that handle, store, or transport Group I–IV oils and Group V oils, respectively.

¹⁵ Ibid.

¹⁶ Section 1910.38(a)(3) incorporates 29 CFR 1910.165 by reference.

Dated: April 18, 1996.

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